PRINTING EQUIPMENT *Engineer*

A Technical Publication for the Mechanical Executive Responsible for Printing Production, Equipment and Supplies in the Commercial, Magazine, Private Plant and Daily Newspaper Field.

MARCH, 1943

an undying Imprint

No other personality in all history has left its imprint more indelibly upon community growth and National spirit than the *printer.* Courageous and optimistic, he pioneered for education and enlightenment and all the advantages which they bring. He spurred civic pride, fought for law and order, opened a fertile field for initiative and earning power. He gave new impetus to business effort. He left cherished traditions. In many instances, America can thank the printing craft for her wholesome ways of life. ★ And like the Minute Men of early days, the printers of today must be alive to the message inscribed upon the printed page—the reason for it, its purpose and desired influence. Only by such genuine interest can they live up to ideals and further the highest efficiency in our war effort. Whatever the National objective, the printer can simplify the means.

HARRIS • SEYBOLD • POTTER • COMPANY

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CLEVELAND, OHIO
MANUFACTURERS OF OFFSET LITHOGRAPHIC • LETTERPRESS AND GRAVURE PRINTING MACHINERY • • • • • •

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General Offices and Factory, Chicago

Of Course—

Ludlow's manufacturing facilities are today devoted almost wholly to war production. We are sure that you would want it no other way.

Yet our customers are producing much printing that is directly or indirectly essential to the war effort, and, in every way possible, we want to help them maintain the continued efficiency of their Ludlow and Elrod equipment.

To the best of our ability, we shall continue to maintain an adequate stock of parts and to provide service, to keep Ludlow and Elrod equipment functioning efficiently.

For the present, our moderate inventory of available Ludlow and Elrod equipment previously manufactured enables us to fill orders for which War Production Board approval, when required, is obtained.

If you have any composing room worries on which we may be able to help you, we shall be glad indeed to have you write us.

Ludlow Typograph Co. 2032 Clybourn Ave., Chicago

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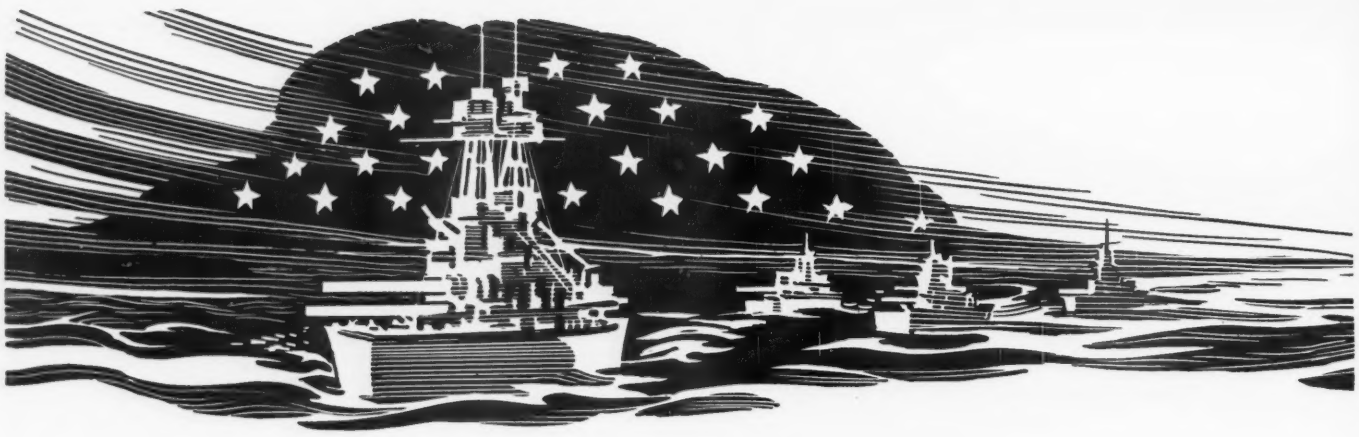

The Allies Still Need Scrap Metal for Ships and Shells ⋆ Guns and Bullets ⋆ Tanks and Trucks

The Graphic Arts Industries have responded in an inspiring manner, but there is still a large amount of scrap metals and other usable materials in the printing, publishing and lithographic plants of Canada and of the United States which can be salvaged and used to meet the vital needs of our respective armed forces.

The job isn't finished . . . Look further . . . Dig deeper . . . Get out the scrap!

Don't Hoard Useless Machinery

This would appear to be a good time to make final profitable use of some of the obsolete and worn-out machines of various kinds which many plants keep standing in the hope that they "some day" will be used—*but seldom are*. These old machines, often affectionally regarded because of past associations, have earned the right to retirement in the service of their country. Add them to your scrap heap.

This appeal is made to printers, publishers and lithographers of Canada and of the United States in behalf of our common war effort. All available scrap is allocated by our Governments, and everything you salvage will ultimately find its way to our fighting fronts. In this way YOU can help win the war.

Salvage for Victory!

LANSTON MONOTYPE MACHINE COMPANY

MONOTYPE BUILDING, TWENTY-FOURTH AND LOCUST STREETS, PHILADELPHIA, PENNA.

Composed in Monotype Baskerville Family

NEEDED

SELDOM USED PRINTING MACHINERY TO MAKE MODERN ARMAMENT

Every slug typesetting machine (1½ tons) provides all the scrap to make:

240 — .30 calibre machine guns, or
5550 — hand grenades

Every 25x38 handfed cylinder (5 tons) provides all the scrap to make:

180 — 20 mm. aircraft cannon, or
20 — "block buster" bombs

Every medium-size folding machine (1 ton) provides all the scrap to make:

36 — three-inch trench mortars, or
296 — three-inch shells

Your contribution of scrap metal can be made promptly, at three or four times scrap value, under the Miller War-Time Scrap Allowance Plan.

MILLER PRINTING MACHINERY CO., PITTSBURGH, PA.

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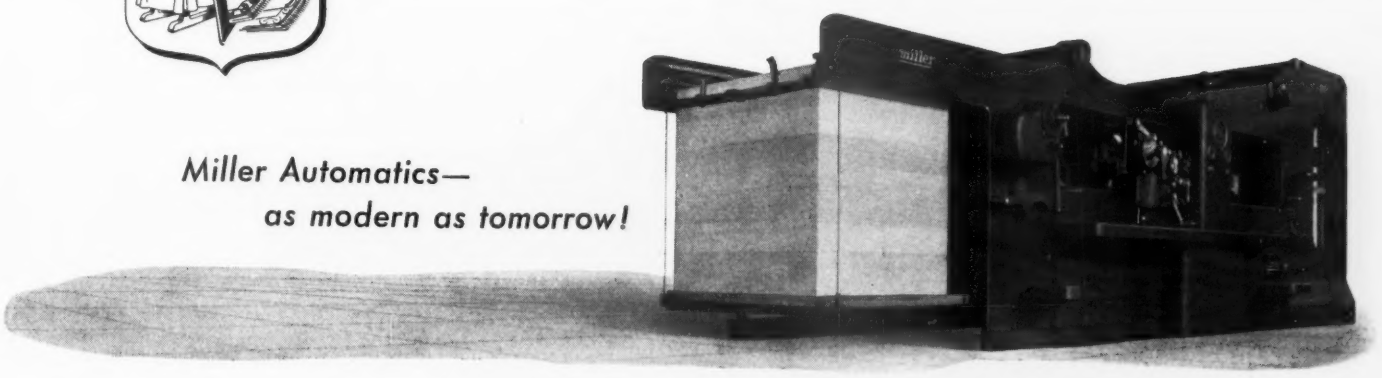
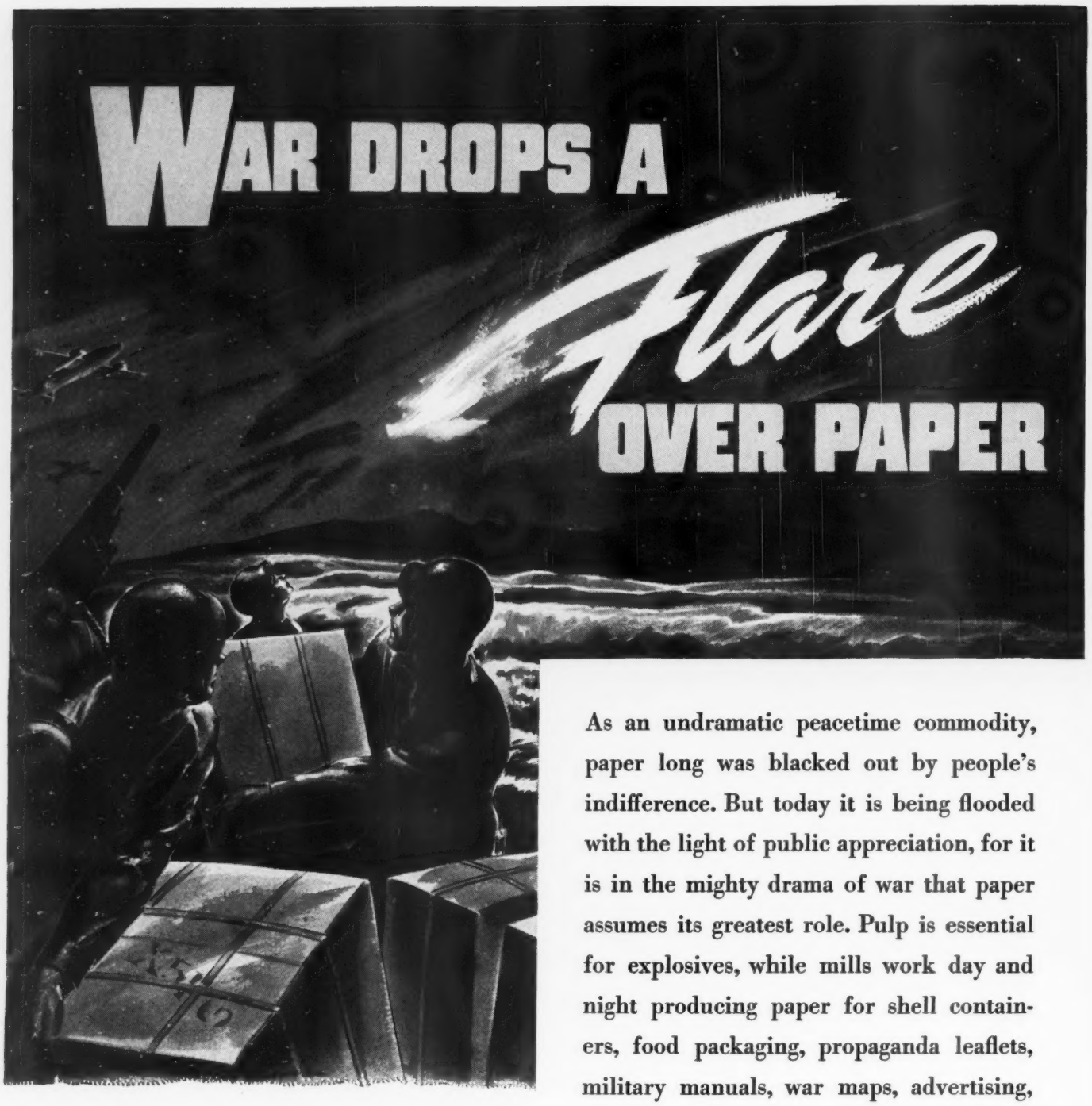
as modern as tomorrow!





As an undramatic peacetime commodity, paper long was blacked out by people's indifference. But today it is being flooded with the light of public appreciation, for it is in the mighty drama of war that paper assumes its greatest role. Pulp is essential for explosives, while mills work day and night producing paper for shell containers, food packaging, propaganda leaflets, military manuals, war maps, advertising, and substitutes for certain critical materials. Champion is proud of its importance in the industry, and of its ability to convert great stands of timber into many materials that contribute to America's early victory.

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Printing Equipment *Engineer*

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Imperial

REDIBOARD

The solution to zinc conservation problems

Imperial present "REDIBOARD" as a solution to problems arising in the use of thin-gauge zincs to replace the standard 16-gauge. REDIBOARD is a specially-treated fibreboard gummed on one side or on both sides, and is applied to the back of 18- and 21-gauge zincs to build them up to 16-gauge thickness.

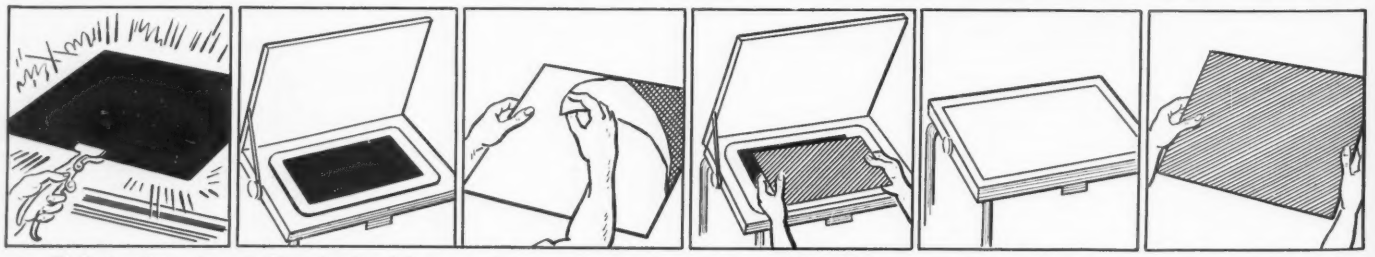
To afford quick identification, REDIBOARD is keyed in color to Redibak, the plastic, ready-to-use acid-resit. For 18-gauge Imperial zinc with red Redibak, we supply red REDIBOARD to build up to 16-gauge. For 21-gauge Imperial zinc with green Redibak, we supply green REDIBOARD to build up to 16-gauge.

REDIBOARD offers these advantages: It eliminates the necessity of several heights or metal bases for mounting. It does away with confusion in identifying the proper base to the proper gauge. Stereotypers need not cast and shape metal base in an assortment of several heights to bring cuts up to type height. Send in your order now for Imperial Redibak Zinc in any of the three gauges—16, 18, and 21. under the required amount of REDIBOARD for either 18- or 21-gauge zinc.

IMPERIAL REDIBAK ZINC AND REDIBOARD — SUPPLIED AS FOLLOWS

16-GAUGE WITH BLUE REDIBAK	18-GAUGE WITH RED REDIBAK	21-GAUGE WITH GREEN REDIBAK
NO REDIBOARD NEEDED FOR 16-GAUGE ZINC	RED REDIBOARD FOR 18-GAUGE ZINC	GREEN REDIBOARD FOR 21-GAUGE ZINC

HOW IMPERIAL "REDIBOARD" IS APPLIED TO ZINC



1. Etched plate is heated to light burning - in temperature (180° F.).

2. Plate is placed face down on felt canvas, or blotter, in a vacuum printing frame.*

3. The waxed paper is stripped off, exposing gummed side of REDIBOARD.

4. Gummed side REDIBOARD is pressed on back of zinc plate and given a few strokes with a roller.

5. Frame is closed, vacuum applied for 2 minutes.

6. Plate with REDIBOARD attached ready for routing or sawing.

*NOTE: Washington hand press may be used instead of printing frame.
REDIBOARD is supplied in the following sizes: 15x36, 18x24, 18x36, 24x36.
REDIBOARD is also used to build up copper.

IMPORTANT . . Rediboard is also available gummed on both sides for flush mounting of cuts.

IMPERIAL TYPE METAL COMPANY

PHILADELPHIA NEW YORK CHICAGO

Printing Plant Fire Hazards in Relation to Machinery Replacement

(An Editorial)

MECHANICAL executives have been advised to "clean house" from time to time simply because it is good practice to set their houses in order by getting rid of the unusable materials, supplies and litter which accumulate over even a short period of time in all production departments of the printing plant. Infrequently used materials do accumulate even where the executive is more or less conscious of the advisability of keeping his house in order.

This subject was called to our attention by a mechanical executive friend recently. He thought right now would be a good time to bring the subject of housecleaning to the attention of our readers for a different reason than usually is the case. This reason is of more importance to you *now* than is superficially apparent if you have not given it any thought. Thinking in terms of the war effort, our present civilian economy and the numerous WPB regulations by which we are now governed, the fire hazard is an extremely important thing. Plant fire hazard should be reduced to the lowest minimum. Every means for eliminating possible causes of spontaneous combustion should be observed. Electrical circuits, fittings, and devices should be maintained with the elimination of fire hazards in mind.

Under the terms of printing machinery order L-226, mechanical executives should know that equipment and supplies can be obtained only by complying with certain conditions stipulated in the order itself. The order, however, doesn't reveal the fact that equipment manufacturers are not now making new equipment. Nor does it reveal that while there is a certain held-over inventory of new equipment in the country (frozen by WPB) there may be extreme difficulty in getting replacement machinery in case yours is destroyed by fire. In other words, a relatively small inventory of new machines is being maintained under WPB authority for emergency purposes principally for Government use and disposition. Obtaining this equipment for civilian use, however, is another matter. No one outside of the Printing and Publishing Division of WPB knows just how much new equipment is available, and we doubt very much if all members of the Division know exactly how the inventory will be allocated under certain conditions. Those who are familiar with the situation do know that in order to get any of the inventoried new equipment a prime reason must be presented to WPB for permission to buy.

Getting back to your own plant again—you may feel secure because your plant is covered by fire insurance. In case some or all of your production equipment is destroyed by fire, the insurance company of course will keep its contract with your firm and will pay off its claim. But, has it occurred to you that even if you have the money from the insurance company, you may not be able to buy the needed replacement equipment? The reason is that it may not be available and manufacturers may not be permitted to make it for you. It is true that your firm's executives can secure some replacement equipment in the used machinery market. Even here difficulty might be encountered because of inability to supply the separate machines which will fit in with such machinery as you are able to salvage after a fire.

Then, too, there are certain procedures which will have to be followed in securing permission to restore the building in which your plant is housed. In the present emergency, everything that goes into building construction and plant equipment is covered by WPB regulations.

While contemplating fire hazards in your plant,

consider keeping oily-inky wiping cloths in tightly covered metal containers, the lids of which will close automatically. Then make arrangements to have those cans emptied and the contents disposed of at non-dangerous intervals. Keep waste paper confined to locations provided for the purpose to eliminate hazards caused by careless tossing of matches, cigarette butts and the like. Clean down those "catch-all" corners in machines which gather oily paper particles and fuzz.

In plants which have been in existence for some time, it is well to inspect all electrical circuits, especially splices and other repairs which may have been made in an emergency and which it was intended to repair permanently at a later date. Eliminate emergency lines which may have been installed so as to by-pass switchboards. Remove such temporary "bridging" as may have been installed to nullify the safety provided by properly rated fuses. Clean out floor surfaces under presses and press-pits. These are the more common causes of fires—perhaps you may find others in your plant if you go looking for them.

The photo-engraving and composing rooms, the stereotype department, the pressroom and mailing department, the paper storage and waste paper baling rooms—none should be exempt from critical inspection for fire hazard.

While you are about it, check into the fire extinguisher equipment to see that all of it is in workable order. Just prod yourself with something like the following: "Our synthetic or rubber rollers are working swell, but if we lost them through fire, how could we replace them?" The manufacturer will do everything he can to help you get going again following an emergency—he will even advise you as to the best method to use in attempting to secure replacements, but just remember he, too, is limited by the availability of critical materials.

Aside from faithfully observing WPB's various "M" and "L" orders, there isn't any way in which you can assist more in winning the war than by eliminating fire hazards. By conscientously getting rid of them you'll be helping not only to insure continuous employment for yourself but will also insure employment for all of your associates in the plant. In certain cases, careful maintenance of safe conditions against fire might mean the difference between survival of your company and going out of business.

The Red Cross and You

THE Red Cross is your Red Cross. Make no mistake about that. While the organization makes no distinction in race or creed in dealing with human suffering, it is yours in a much more personal sense than that.

The Red Cross is doing the things which you yourself would do if you had the opportunity. Perhaps you are one of the million who donated a pint of blood to the Red Cross in 1942. Even if you were unable to donate, you probably know that this blood is processed into plasma, shipped to the world's battlefronts and used in giving transfusions to the wounded.

No less an authority than Surgeon General Ross T. McIntire of the Navy recently stated that, thanks to plasma and other newly-developed methods of treating the wounded, the Navy is losing less than one percent of those wounded on Guadalcanal. If a member of your family or a close friend is out there, you can rest assured there will be a supply of plasma for him should it be needed.

Secondly, thousands of Red Cross volunteers today are busy making surgical dressings. They are turning them out by the thousands every day, and these dressings, like plasma, are being used wherever our boys go into action.

Perhaps among your relatives or acquaintances is someone who has fallen into the hands of the enemy and is now a prisoner of war. Through the Red Cross these unfortunates are receiving shipments of food and cigarettes, clothing and other articles. Red Cross standard food parcels are being delivered regularly to Americans held in Europe and as many as possible are being sent to the Far East.

Perhaps you are one of the younger men soon to be inducted. When you go to training camp, you will find Red Cross representatives there. What for? Well, for many reasons, but mostly, however, to keep the soldier from worrying about family problems at home and to help him in every conceivable way. Here's a sample, and it can easily be seen a similar experience might happen to anyone.

The wife of a soldier on furlough suddenly became critically ill. Under the doctor's orders the soldier was required to stay at his wife's bedside until she was out of danger. When the soldier wired his commanding officer for an extension of furlough, this was refused. On the spot, the soldier stuck by his wife, and several days later the local Red Cross chapter had word from the Red Cross field director at the soldier's camp to get in touch with him and warn him to return, else he would be classed as a deserter which, in wartime, is an extremely serious charge.

When they got in touch with the soldier, they learned the true state of affairs from the doctor in charge, communicated this to camp and, with this authentic verification, the furlough extension was granted. When the soldier did return, no charges were placed against him.

Another case involved a sergeant in Ireland whose wife suddenly died, leaving their small daughter. Immediately the Red Cross chapter became aware of the situation arrangements for care of the child were made. A whole series of legal steps was necessary to make adequate provision for the child, and these were all handled through the Red Cross field director with the troops and the chapter back in the States.

The Red Cross is active not only with the troops but on the home front as well. Perhaps you are one of the 5,500,000 who received first aid instruction from the Red Cross last year. Possibly you or a member of your family participated in a Red Cross course in home nursing. With the growing shortage of doctors and nurses, the knowledge gained in these courses may prove extremely valuable.

The Red Cross is prepared, too, to look out for you should disaster strike. In the past 21 years almost 4,500,000 persons who were victims of fire, flood and other catastrophe in the United States received Red Cross emergency care. Today the Red Cross is more than ever prepared to cope with disaster.

The foregoing are by no means all the possible points of contact between you and your Red Cross. But they are sufficient to give an idea of the far-flung services which the organization is providing or prepared to provide, sufficient to prove that these services are the very things you yourself would like to do.

The 1943 Red Cross War Fund campaign is being held so that this work can go on without let-up. It is up to you. You are the one who, through your contribution, will provide plasma and surgical dressings for our wounded, help our soldiers in the solution of family and personal problems, and make it possible to train our civilian population to meet any emergency. March is the month, $125,000,000 is the goal.

PRINTING AND PUBLISHING INDUSTRY

placed under CMP Reg. 5 commencing April 1 for purchase of maintenance, repair and operating supplies — Industry granted AA-2X rating which supersedes old A10 under P100 rating

ON April 1, the entire printing and publishing industry will be governed by the provisions of Controlled Materials Plan Regulation No. 5 issued by the War Production Board on February 9 for maintenance, repair and operating supplies (MRO). For this purpose, the printing industry has been granted an AA,2X rating for use after March 31, 1943 on purchase orders for maintenance, repair and operating supplies.

It is understood that the rating, AA-2X, designated for the printing and publishing industry supersedes the old A-10 Under P-100 Rating commonly used on purchase orders for some time now in buying maintenance, repair and operating supplies. At the time of writing this article, however, Order P-100 has not been revoked.

It is also understood that nothing in the new Controlled Materials Plan Regulation No. 5 shall be construed as interfering with any WPB order now in effect, such as "L" (Limitation Orders) and "M" (Materials Orders). In other words, for instance, Order L-226 is in effect and full force and governs the manufacture, sale and purchase of printing equipment, operating supplies (as stipulated) and replacement parts.

Another instance is cited: In the case of printers and/or publishers (not under PRP) who, maintain engraving departments for their own exclusive use, and who have been operating under Obsolete Plate Order M-99 as Amended Nov. 13, 1942, compliance with Order M-99 as indicated by your certification in itself does not provide a symbol which will guarantee the purchase of engraving zinc—it merely indicates that you are eligible to purchase engraving zinc so far as the M-99 certification itself is concerned. In addition, under the new CMP Regulation 5, you place a certification bearing this symbol "AA-2X" on your purchase order for engraving zinc since it is an operating supply.

Maintenance, Repair and Operating Supplies Defined

"Maintenance" as defined in the order means the minimum upkeep necessary to continue a facility in sound working condition. "Repair" means the restoration of a facility to sound working condition when the same has been rendered unsafe or unfit for service by wear and tear, damage, failure of parts or the like. There is a provision, however, in (b) (3) of the order whereby minor items of productive capital equipment and minor capital additions or replacements not exceeding $500 (excluding cost of labor) may be included as maintenance, repair and operating supplies. It is provided that no capital equipment, addition or replacement aggregating more than $500 in cost shall be subdivided for the purpose of coming within this definition. It is also provided that the acquisition and use of materials for construction shall be subject to the provisions of Conservation Order L-41.

The definition of "Operating Supplies" is "any materials or products which are normally carried as operating supplies according to established accounting practice and are not included in the finished product except that materials included in such product which are normally chargeable to operating expense may be treated as operating supplies." *Not included* as operating supplies are fabricated containers; printed matter and stationery; paper, paperboard and products manufactured therefrom; molded pulp products; fuel or electric power; office machinery or office equipment; clothing. Safety clothing, however, specially designed to furnish protection against occupational hazards such as impregnated safety clothing, rubber gloves, welder's and electrician's gloves, may be included in "operating supplies."

Procedures for Obtaining Controlled and Non-Controlled Materials

It is stated in a WPB release dated February 9 that CMP Regulation No. 5 controlling purchases of maintenance, repair and operating supplies, establishes required procedures for obtaining both controlled and non-controlled materials.

When "Controlled Materials" are to be bought, the preference rating AA-2X must not be used on purchase orders, but a special certification as given in CMP Reg. 5 is to be placed on the purchase order. "Controlled Materials" are defined as listed shapes of carbon and alloy steel, aluminum, copper and copper alloys (the latter to contain 40% or more copper). The shapes specified are in the form of bar, rod, sheet, plate, pipe, wire and wire products, and the like. When in a form which is not included in the controlled materials list, these materials are not controlled materials. Outside of tying wire, printing and publishing plants do not buy much controlled materials.

As is stated above, the rating AA-2X must not be applied to purchase orders for controlled materials. Instead, in the case of steel and copper, the following special certification is to be used substantially:

> CMP allotment symbol MRO— (P order No.....)— The undersigned certifies, subject to the criminal penalties for misrepresentation contained in section 35 (A) of the United States Criminal Code, that the controlled materials covered by this order are required for essential maintenance, repair or operating supplies, to be used for a purpose listed in Schedule I or Schedule II of CMP Regulation No. 5 and that delivery thereof will not result in a violation of the quantity restrictions

Craftsmen's 1943 Convention

ACCORDING to announcement by President Eric O'Connor of Montreal, the 1943 convention of the International Association of Printing House Craftsmen will be held at Hotel Peabody in Memphis, Tenn., on Tuesday, Wednesday and Thursday, August 10, 11 and 12.

The convention days of Tuesday, Wednesday and Thursday were selected to avoid travel over either weekend. On weekends, military travel is exceptionally heavy. In addition, better hotel accommodations can be secured in the middle part of the week because accommodations are severely strained over weekends by parents visiting soldiers and sailors in cities, where, as in Memphis, there are extensive military and naval establishments.

The annual banquet will be held Thursday evening so that none of the clinics will be prejudiced by hasty departures. There will be the same clinical type of educational program, featuring comment and discussion from the floor.

President O'Connor, according to the announcement, promises that the technical and educational program will be fully up to standard. A number of new features will be announced soon.

General Convention Chairman Ray F. Brown and Publicity Chairman A. Horace Kelley, jr. are well known to many Craftsmen as regular convention attendants.

The Peabody Hotel at which the convention will be held is air-conditioned. The hotel has guaranteed Craftsmen enough rooms to provide for everyone under one roof. Railroads entering Memphis from all directions provide easy access to and from the city.

contained in paragraph (f) of said regulation.

For the purchase of aluminum, not to exceed 100 lbs. from all sources during any one calendar quarter, in controlled material forms or shapes, a special certification to be applied to purchase orders is given in CMP Reg. 5. However, since printing and publishing plants buy a negligible amount of aluminum in controlled material form or shape, for essential maintenance, repair or operating supplies, we will not quote the certification here. When covered by any order in the "P" series, the company making the certification shall show in the indicated space the number of such "P" order. For the printing and/or publishing plant this symbol is P-100.

Non-Controlled Material Purchase Orders

When making out purchase orders for non-controlled materials, the purchase order shall carry the preference rating AA-2X in connection with a certification—that is, the preference rating and the certification are to be used in combination. This may be signed manually or facsimile signature may be used as provided for in Priorities Regulation No. 7. The certification as used by printing and publishing plants for purchase orders for non-controlled materials is as follows:

> Preference rating AA-2X — MRO — The undersigned certifies, subject to the criminal penalties for misrepresentation contained in section 35 (A) of the United States Criminal Code, that the items covered by this order are required for essential maintenance, repair or operating supplies; that this order is rated and placed in compliance with CMP Regulation No. 5; and that the delivery requested will not result in a violation of the quantity restrictions contained in paragraph (f) of said regulation.

Quantity Restrictions

In reading over the two certification forms for both controlled and non-controlled materials, printing plant executives will have noticed references to the quantity restrictions as imposed by paragraph (f) in this CMP Reg. 5. Paragraph (f) with respect to quantity restrictions is as follows:

> . . . No person shall use the allotment symbol or preference ratings assigned by this regulation to obtain maintenance, repair or operating supplies during any calendar quarter in an aggregate amount exceeding one-fourth of his aggregate expenditures for maintenance, repair and operating supplies during the calendar year 1942 (or his fiscal year ending nearest to December 31, 1942) . . .

An exception is made in the case of seasonal businesses, but in no case shall the rating be used to obtain maintenance, repair and operating supplies during the 12 months ending March 31, 1944 in an amount exceeding the aggregate expenditures for such supplies during the calendar year 1942, (or such fiscal year).

A person (company) who has several plants which maintain separate records of supplies shall treat them separately for purposes of complying with quantity restrictions.

Other Details

In paragraph (a) of this CMP Reg. 5, it is provided that persons who are able to obtain maintenance, repair and operating supplies in such quantities as are available from warehouses or distributors, or at retail, without preference ratings or allotments, may obtain them without using the procedure provided in this regulation.

As is indicated in the first part of this article, it is stated in paragraph (k), section (4) that "Nothing in this regulation shall be construed to relieve any person from complying with any applicable priorities regulation or order of the War Production Board (including orders in the "E", "L" and "M" series) or with the order of any other competent authority."

Keeping Records

Provision is made in the order for keeping records, as follows: In paragraph (m) it is stated: "Each person acquiring maintenance, repair or operating supplies pursuant to this regulation shall keep and preserve, for a period of not less than two years, accurate and complete records of all such supplies so acquired and used, which (the records) shall, upon request be submitted to audit and inspection by duly authorized representatives of the War Production Board."

OTHER WPB NEWS

No Further Print Paper Cuts at Least Till After July 1

PRINTING plant executives will be relieved when they are informed that there will be no further curtailments in the use of print paper in newspapers, magazines, books, and commercial printing at least until after July 1. This announcement was made by the War Production Board on March 4, and is made possible by confirmation by Canadian authorities of their undertaking to furnish for shipment to the United States 1,170,000 tons of woodpulp plus an additional 107,000 tons which the Canadian government will call upon its pulp and paper industry to supply within the next few months. This woodpulp is in addition to shipments of newsprint from Canada.

R. L. Weldon, Canadian newsprint administrator, advised WPB on February 20 that an unexpected amount of wood had been cut during the winter in Canada. Accordingly, the Printing and Publishing Division of WPB announced that the proposed second curtailment in the use of newsprint of not to exceed 10%, effective April 1, would be held in abeyance.

However, the need of an additional supply of pulp wood, over and above the amount previously assured by the Canadian authorities, was imperative for the manufacture of other grades of paper in the United States unless further cuts in use were to be applied to users of print paper other than newspapers.

To that end and to clarify the entire pulp and paper situation in the best interest of the war program of both countries, representatives of WPB, the Canadian Pulp and Paper Administration of the Wartime Prices and Trade Board, and the Timber Controller of the Department of Munitions and Supply of the Dominion of Canada met for a two-day conference in Montreal.

Following this meeting, Mr. Weldon and A. G. Wakeman, Director of the Pulp and Paper Division, WPB, made the following statement:

"The supply of pulp wood made available from this season's cut and now in sight at Canadian mills makes it possible to provide additional wood pulp to meet the urgent needs of the United States. Canada's previous undertaking to furnish during 1943 for shipment to the United States 1,170,000 tons of wood pulp has been reviewed and confirmed. In addition, Canadian Newsprint Administrator R. L. Weldon will call on the Canadian industry to supply a further 107,000 tons of wood pulp within the next few months."

It was pointed out that the supply of pulp wood is subject to unpredictable changes and therefore the two administrations have arranged to watch this whole situation closely and to make the matter the subject of a further review toward the end of April. At that time it also will be determined whether any

Second-Quarter Obsolete Plate House-cleaning

In accordance with the provisions of WPB's Obsolete Printing Plate Order M-99, have you, or are you prepared to clean out the obsolete printing plates in your files, morgues or libraries?

The calendar quarter is the measuring rod by which you make disposal of obsolete plates as defined in the order. The next calendar quarter commences April 1.

additional supply of wood pulp can continue to be made available during the second half of the year.

According to WPB authorities, A. H. Williamson, Canadian Timber Controller, has given assurance that authorizations for the shipment to individual mills in the United States of 1,550,000 cords of pulp wood will be made to destinations at the direction of WPB.

Commercial Printing Paper Order L-241 Amended

ON page 12, January issue of *Printing Equipment Engineer*, appeared a review of WPB's Commercial Printing Paper Order L-241. On February 26, the order as amended was released to the printing industry. The original order (published on January 8) defines "printed matter" as any paper with ink applied to it by the relief, planographic, intaglio, silk screen or other stencil processes or any combination or modification thereof, except six classifications of printed matter which are covered by other individual "L" orders.

The amended order as issued by WPB on February 26, contains an additional list of exceptions to the definition of printed matter which do not come within the meaning of Order L-241 as Amended.

These exceptions which do not apply to L-241 are as follows:

"(vii) Printed matter produced by or for the account of any department or agency of the United States, its territories or possessions, or any State, county or municipality in the United States; and such printed matter as shall be either: required by the contract between a supplier or contractor of any department or agency of the United States and such department or agency; or necessary for the production of, the delivery to, or the use of products by any such department or agency.

"(viii) Printed matter produced by or for the account of any public utility necessary for the functional operation of such utility including but not limited to railroads, bus companies, motor transport companies, air transport companies, communication companies, gas, water and electric power companies.

"(ix) Printed matter required by law in connection with any Federal, State, county or municipal tax laws or regulations."

Otherwise, the context of Order L-241 appears to be the same as issued originally on January 8.

Relaxes Paper and Paperboard Conservation Order M-241-a

EFFECTIVE February 15, the list of paper products which converters had been barred from manufacturing were partially relaxed by Conservation Order M-241-a as amended on February 8 by the Director General for Operations. Relaxation was effected through transfer from the eliminations list (List B) to the percentage list (List A) a number of items including coasters, doilies, shirt bands, collar supports and slippers.

The order permits use of paper (including pulp and paperboard) for coasters, doilies, shirt bands, collar supports and slippers in amounts ranging from 50% to 90% of the amount used in 1942. The Pulp and Paper Division pointed out that coasters, which protect furniture and linen, and shirt bands and collar supports, which substitute for pins, are made from waste paper. Doilies save linen and laundry and paper slippers are a well recognized sanitary precaution, the Pulp and Paper Division added.

The amended order also clarifies the use of the word "consume" in section (b) (2) as specifically prohibiting completion of partially processed inventories of converters.

$100 or Less PD-1As To Be Filed at Regional Offices

ANOTHER step in the decentralization of War Production Board activities was made public on February 24, when Chairman Donald M. Nelson announced a new WPB administrative order which directs that after March 1 applications for priority assistance on Form PD-1A be filed with the nearest of the 131 WPB district offices, and authorizes the 12 Regional Offices, beginning March 15, to assign preference ratings on PD-1A certificates to deliveries of materials valued at $100 or less.

Mr. Nelson said that the preliminary value limitation of $100 would be progressively stepped up as the field offices assume greater responsibilities and he expected that within six weeks more than eighty per cent of all PD-1A applications would be handled entirely by the Regional Offices.

Ratings assigned on PD-1A certificates are known as "single-shotters", since the priority assistance they provide is applicable only to the particular delivery for which help is requested. They do not establish the continuing assistance provided by PRP and CMP, and by orders in the "P" series covering specified industries.

Later—PD-1As To Be Filed with Nearest Field Office

Under date of February 25, Director General for Operations Curtis E. Calder of the War Production Board issued the following announcement with respect to PD-1A revised forms and the method of filing with nearest field offices:

"After March 1, 1943, PD-1A applications should be filed with the nearest War Production Board field office. In the interest of economy, present forms requiring mailing to Washington will not be scrapped, but these instructions covering filing in the field will govern.

"By filing with local field offices, it is expected that handling of your applications will be materially expedited.

"After March 1, the revised PD-1A will be available for your use from WPB field offices. After April 15, applications will not be accepted unless filed on the revised forms."

1943 ANPA Mechanical Conference In Print

IT has been announced that the 1943 ANPA Mechanical Conference will be held by mail, or in print. The decision of the Mechanical Committee to hold this year's conference in this manner instead of holding the usual "live" meeting, no doubt was influenced by the request of ODT Director Eastman that all "live" meetings not directly essential to winning the war be cancelled.

The 1943 Conference was originally scheduled to be held at Hotel Statler, Cleveland, on June 8, 9 and 10. At the moment no date has been announced for the holding of this year's conference via Uncle Sam's postoffice. Usually, however, the conference is held early in June.

In newspaper mechanical executive circles, the annual Mechanical Conference has been the big meeting of the year which is looked forward to eagerly by printing, mechanical and production executives and representatives of the various equipment and supplies companies.

The announcement, of course, has caused considerable disappointment among newspaper executives, but at the same time they realize that anything that will relieve transportation facilities is of prime importance right now.

The Mechanical Committee will meet in New York on April 19 to formulate the exact procedure for holding the conference in print through the mail. Meanwhile, it is understood that suggestions from interested executives are being received both by Chairman John Park and Mechanical Department Manager W. E. Wines.

In the opinion of *Printing Equipment Engineer*, while this is the first conference to be held in this manner by the Mechanical Department, there isn't any reason why the conference should not be successful from every angle. The Committee has every facility for making such a "meeting" of great value to newspaper mechanical executives. In addition, there is an abundance of program talent among member newspapers as well as manufacturer executives who have participated in many programs. Real convention color can be introduced to simulate the real atmosphere and to bring close together all those who "attend." Other organizations have already conducted worthwhile conventions by mail. Perhaps their experience would be available in this instance, if the committee feels it necessary to have advice.

Motors Must Bear AA-5 or Higher

CONSERVATION Order L-221 was amended by WPB, it was announced on January 15 by the Director General for Operations so that purchase orders for electric motors and generators shall not be accepted by manufacturers or dealers unless they bear preference ratings of AA-5 or higher.

The amended order thus provides a rating "floor" on orders for both electric motors and generators. No other changes are made in L-221 as amended December 8, 1942.

Conservation Order L-250 Regulates Motor Controllers

ON February 13, WPB issued Conservation Order L-250, regulating the manufacture of electric motors and controllers. Principal provisions of the order are as follows:

On and after March 1, 1943, no manufacturer shall accept, or commence manufacture in fulfillment of any order for any controller or part, unless the order bears a preference rating of AA-5 or higher.

On and after March 1, 1943, no manufacturer shall accept an order for, or commence manufacture of, any controller or part unless the controller or part is to be manufactured in accordance with the standards set forth in the conservation order, nor shall deliveries be made on a controller, or part, after May 14, 1943, unless it conforms with standards stipulated in the Conservation Order L-250.

In the list of definitions, the word "Controller" means any new device or equipment employed to stop, start, or regulate electric motors, or to protect electric motors against overloading, including manual and magnetic controllers, contactors and relays, and pilot devices such as push-button stations, limit, pressure, and float switches.

Provisions of the order stipulate simplification in manufacture and restrictions on the use of certain materials in the making of enclosing cases, controllers and parts of controllers as follows:

A controller shall not be used on a smaller motor than that for which the controller is recommended under standards prescribed in the order.

No general-purpose controller for a single motor, rated 600 v. or less for full or reduced-voltage starting of a d.c. motor, or for reduced-voltage starting of a d.c. motor, shall include control circuit fuses or disconnect switch.

No general-purpose controller for a single motor, rated at 600 v. or less for full or reduced-voltage starting of an a.c. motor, shall include a control circuit transformer if a suitable commercial pilot circuit device is available for use on the line voltage.

No controller or control equipment of the types listed in the order and rated 600 v. or less, shall be provided with an enclosing case unless conditions stipulated in the order warrant it.

No controller is to be supplied with built-in test jacks or test receptacles.

Meters on controllers shall not be furnished when used with a.c. motors of less than 1000 h.p., or with 50 h.p. or less d.c. motors, except that line and field ammeters may be included on synchronous-motor controllers.

The restrictions on manufacture do not apply to controllers delivered for use in the armed services, Maritime Commission or the War Shipping Administration.

Building Maintenance and Repair Defined

A REVISED definition of what constitutes maintenance and repair of a building is contained in an amendment to Conservation Order L-41, which was made effective February 19. The new definition specifically designates that where a single job is partly maintenance and repair and partly new construction, the whole project will be considered new construction and subject to Order L-41.

In addition, the amendment reduces to $200 new construction which may be undertaken, without specific authority, by a number of manufacturing enterprises which are not essential to the war program. Moreover, the amendment applies to private dwellings and commercial structures.

Order L-41 is a limitation order which is designed to prevent unnecessary construction in order to conserve materials, facilities and labor for essential war uses.

Under the new definition, maintenance and repair means the work that is necessary to keep a structure in sound condition, but does not include any building operation involving a structural alteration or change in design.

In specifying industrial structures whose exemption under L-41 is reduced to $200, the amendment embraces all structures which have as their principal function the manufacture, processing, or assembling of books, magazines, newspapers, greeting cards, or other printed or engraved matter and a number of other manufacturing, processing or assembling operations not related to the printing industry. Any industrial construction with a productive floor area of less than 10,000 square feet is also included. The amount of exemptions previously allowed these structures varied.

1. Provision is made for emergency work on any damaged structures for the protection of the structure and the public.

2. In prohibiting construction in violation of L-41, the amended order forbids not only the beginning of such construction but also forbids carrying on or participating in the work.

3. The cost of construction as defined in the order has been narrowed to exclude financing and insurance charges as elements of cost.

4. The exemption of certain types of agricultural construction is permitted to reflect the USDA rationing program.

Concurrently with the amending of Order L-41, Interpretation No. 1 was issued, embodying all interpretations, which existed previously, but which were not included in the order itself.

Duplicating Machines Redefined

A MORE specific definition of "offset" duplicating machines recently was inserted in Order L-54-c (office machinery) by the Director General for Operations in amending the order. Now included under the heading of "duplicating machines" in List B of the order are "Multilith and Davidson duplicators" instead of "offset machines." Production quotas for these machines for 1943 remain at 48 percent of the dollar value of similar machines produced in 1941.

Zinc Control Tightened

BECAUSE printing executives are interested in the zinc situation, since they are already working under a sharp curtailment program, the following announcement concerning the national situation will be of interest:

Control over use of zinc was tightened on February 9 with additions to Conservation Order M-11 which place remelt zinc under the same controls as the six higher grades, limit delivery of zinc by dealers to orders bearing ratings of AA-5 or higher, and regulate the transfer and use of zinc scrap.

Supplies of zinc are growing steadily tighter. Order M-11 as amended February 9 by the Director General for Operations makes war controls over shipment and use of zinc virtually complete.

As in the previous order, dealers may not ship zinc to any person who has received more than 20 tons from all sources that month, or to one who has requested or received an allocation certificate that month.

The new restrictions on zinc scrap provide that it may be shipped only to scrap dealers, producers and manufacturers for use in redistilled zinc, remelt zinc, brass, zinc dust, zinc oxide, chemicals or salt, except when specifically authorized by WPB.

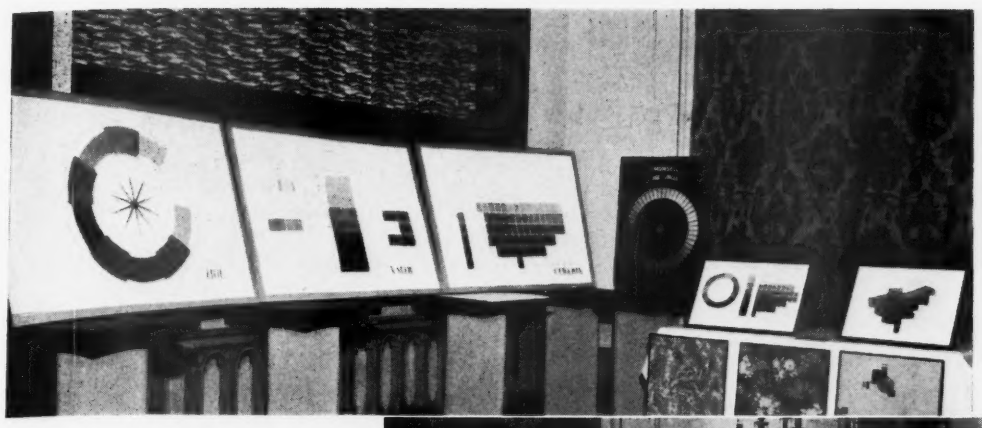
Resin Situation Eased Somewhat

THE nitrocellulose situation during February has eased somewhat and the same condition probably will continue in March, the Pyroxylin and Vinyl Resin Coated Paper and Fabric Industry Advisory Committee was informed by the Chemicals Division of the War Production Board at a meeting in Washington.

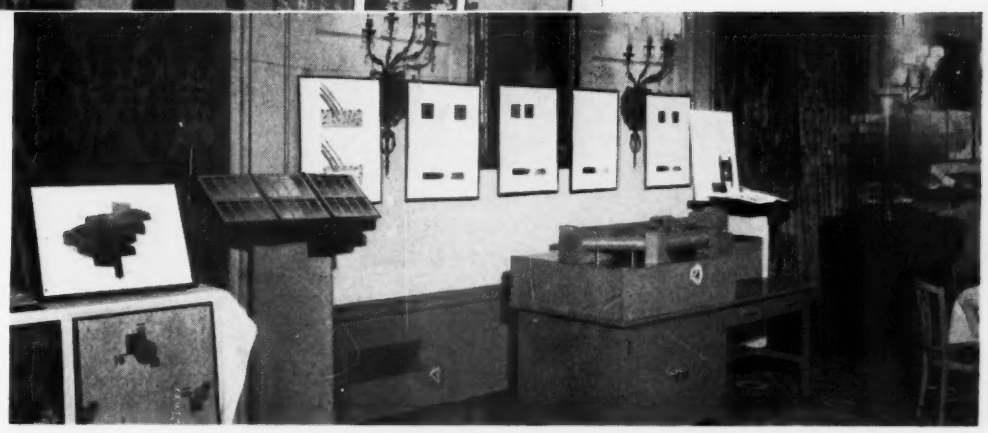
The phenol resins situation is tight but not as critical as that in alkyd resins, the committee was told, while the situation in all fats and oils is still critical and will undoubtedly continue so because of their need in food.

Concerning vinyl resin, considerable scrap is available but there is little advantage in attempting to use it because

(*Continued on Page 14*)



At left: The Munsell System offers visual color charts which have been calibrated by means of the spectrophotometer. The psychologist's basic elements are hue, value and chromas—the three "dimensions" which determine the colors in the Munsell System.



At right: The Recording Spectrophotometer with charts illustrating its function. The Spectrophotometer analyzes color in terms of percentage of light reflected or transmitted by the color. The physicist's basic elements are dominant wave length, brightness and purity.

SYSTEMS *coordinated for specifying and describing color—Spectrophotometer and Munsell system are recognized as standards for color control**

*Printed by permission of *Industrial Standardization*.

A NEW color standard which is expected to eliminate much of the existing confusion in matching colors was explained and demonstrated at a conference November 30 under the auspices of the American Standards Association. The conference was attended by the press and by leaders representing a broad cross section of the industries in which color is an important factor.

The objective of the new American War Standard, Specification and Description of Color, is to reduce to a common language the results of years of technical developments in the measurement of color, so that color can be specified in terms that mean the same to the engraver, to the ink, die, and paint maker, the industrial finisher, the chemist, the printer, the paper and textile manufacturer, and to others interested in color.

Provides Color Language

During the last few years an accurate language has been available in terms of the physicist but only a relatively small group working in the field of color measurement was familiar with it. The new standard provides a language by which color may be described by means of three basic elements—either by using the physicist's "dominant wave length," "brightness," and "purity"—or by using the psychologist's "hue," "value," and "chroma." And the standard makes it possible for us to translate from one system to the other at will.

Spectrophotometer is Basis

For the new color language, the Standard recognizes the spectrophotometer as the basic instrument for the standardization of color, and the use of material standards (color samples) for the popular identification of color. The spectrophotometer, an instrument of which there are several types, analyzes the color in terms of the percentage of light reflected or transmitted by the color.

Relative to the use of material standards, the new standard states that "The only system of material standards that has been calibrated in terms of the basic specification is represented by the 1929 edition of the Munsell Book of Color, which contains a readily comprehensible system of color samples. The use of this book is recommended wherever applicable to the specification of the color of surfaces. Approximate identification of Munsell hue, value and chroma may be obtained by direct visual comparison with the samples in this Book of Color."

The approved standard thus provides two standards: a fundamental or primary standard, in terms of which any system of color samples can be calibrated; and a secondary or working standard consisting of a series of color samples that have already been calibrated in terms of a fundamental standards, *viz*, the samples in the 1929 Munsell Book of Color.

Three Numbers Identify Color

Either of these two standards makes it possible to identify a color, or to compare two colors, by telegraph, by sending three numbers.

The fundamental standard has the great advantage that it is reproducible at any time and is in nowise dependent upon the permanence of any physical sample. It can thus be used to determine whether a physical sample changes with time. In fact it would make it possible to reproduce any physical sample accidentally destroyed.

The approval of the 1929 Munsell Book of Color as a part of this American War Standard in nowise prevents the approval, as a part of an American Standard system of color, of any other series of color samples that may in the future be calibrated in terms of the fun-

damental standard. It merely happens that it is the only system that has, as yet, been so calibrated. In fact the calibration of the widely used series of color cards of the Textile Color Card Association in terms of the fundamental color standard is now being put into operation.

The wide adoption and use of the new color specification standard will put color specification on a more scientific and practical basis. It should help eliminate much of the confusion now present in color specification not only for war products but for peacetime products as well.

Aircraft Colors Difficult to Match

For example, in the aircraft plywood program today a prime contractor may have as many as fifty sub-contractors building wing and tail parts, complete wings, fuselages, etc. Most of these call for camouflage green which is a grayish olive drab, a difficult color to match so that it will be the same under all light.

Color chips used by sub-contractors to arrive at this color may vary widely because of deterioration or because the chips were furnished from the standards of different manufacturers. Thus, when the different parts are assembled, there may be a wide variance in color, thus causing a loss of production time if government specifications are to be met.

This same condition applies in industry generally, where an equipment is built by one manufacturer to be integrated with another manufacturer's equipment. There have been many instances where the equipment would have to be refinished so that the color variance would not be noticeable.

The use of the new standard provides a standard specification for all suppliers to meet, thus assuring that parts are of uniform color when assembled.

Color standardization is important in assuring that the color of different batches of equipment or commodities is uniform. A batch might pass visual inspection yet not be uniform in color under all conditions. The variance might not be apparent until units of the different batches are placed alongside each other.

In filling an order in which the spectrophotometric specification is given, the trained colorist will know at once by the monochromatic data the nature of the color required. The finished material will then be checked on the spectrophotometer to match exactly within the given tolerances of the specification.

Refer to 1929 Munsell Color Book

In applying the new standard to fill an order in which the Munsell notation is given, reference is made by the supplier to the 1929 edition of the Munsell Color Book. He will then match the visual sample indicated. If the specification is given in a Munsell specification not in the 1929 Book, it may be found among the interpolated curves published by the United States Department of Agriculture and in the report of the sub-committee of the Optical Society of America published in the journal of the Society.

In some cases a color name rather than a number is needed to identify a color. This can be done by using the ISCC-NBS system which is based on the Munsell system. It gives 300 and more common color names, selected and defined by means of ranges of the Munsell hue, value, and chroma. The plan of this system was developed by the Inter-Society Color Council, an organization centered around 13 national societies interested in color. The details of the system were worked out at the National Bureau of Standards. The names are simple color names like light green, deep red, and dark brown. To each of such names is assigned, not one single color, but a considerable range of color which accords with its accepted meaning.

How American Flag Red Is Determined

The ISCC-NBS name for the standard red of the American flag, for example, would be determined as follows: First, the red in the Munsell color book which corresponds visually to the red in the flag is found. This is Munsell 5 red, 3 value, 14 chroma, written 5R 3/14. The name charts then show that Munsell 5R 3/14 falls within the color range designated *vivid red*. This designation, vivid red, is not exclusive enough for a purchase specification. There are other vivid reds which differ too much from the red of the flag to be acceptable. But the designation, vivid red, gives a fairly graphic idea of the kind of color it is. Although this system is not precise enough for purchase specifications, and is too precise for ordinary conversation or for use in sales promotion, it is being used for the description of drugs and chemicals, and is being introduced into the standard reference books for pharmacists. It is also being used by the U. S. Department of Agriculture for the description of soils, and by the National Bureau of Standards for certain kinds of building stone. It has been recommended for chemistry textbooks on qualitative analysis; and, in short, is useful "wherever general comprehensibility is desired and precision is not important."

Sponsored by General Electric and Interchemical

The request for approval of the standard for specification and description of color was sponsored jointly by the General Electric Company and the Interchemical Corporation. Both of these companies have devoted a great deal of attention to fundamentals of this standard over a period of years. General Electric pioneered in marketing a commercial model of a recording spectrophotometer invented by Dr. Arthur C. Hardy of the Massachusetts Institute of Technology. This instrument measures color in terms of the wave lengths of the spectral colors. The Interchemical Corporation has pioneered in the use of the recording spectrophotometer to establish color standards for inks, pigments, paints, lacquers, enamels, and other protective and decorative finishes. In 1935 Interchemical published "Three Monographs on Color" which presented the results of a study of color.

During the process of approval of the standard by the American Standards Association approximately 33 companies and organizations indicated their approval of the standard. The standard is being used by the National Bureau of Standards and the Department of Agriculture in their regular testing work.

Other WPB News

(Continued from Page 12)

of the difficulty of obtaining plasticizers.

The Manning Table Plan and procedure to be followed in requesting deferments for indispensable employes were described at the meeting by a representative of the Labor Production Division of WPB.

No. 1 Salvage Problem

COPPER scrap is the number one industrial salvage problem in 1943, although iron and steel scrap collection must be maintained at high level, Hamilton W. Wright, chief of the War Production Board's Industrial Salvage Branch, told a conference of regional chiefs of the branch who came to Washington recently to learn the programs, policy, and special methods of handling industrial salvage projects set up for 1943.

Industrial salvage must produce a very large per cent of the scrap necessary to keep America's steel mills, copper, and aluminum plants at peak war operation during 1943, Mr. Wright explained.

"Dormant scrap is idle, slacker metal loafing on the home front when it should be fighting on the battlefront," he said.

Tested Standards *and operating methods in offset-lith pressroom should be employed more carefully than ever — Employee educational program secures cooperation—Superintendents and foremen should not "get far away" from actual press operation*

By JOSEPH MACHELL*

*General Superintendent, Stecher-Traung Litho Co., Rochester, N. Y. Abstract of address delivered before National Association of Photo-Lithographers' convention, Cleveland, July, 1942.

TESTED standards and methods of operation applicable to the average lithograph pressroom must be employed now more than ever before. The small things that have been neglected for years by many lithographers are the ones that sometimes cause the most trouble, because it is now necessary to use substitutes in the making of certain lithographic materials.

In this discussion, I would like to consider some of the equipment and materials we use to make good lithography possible. First, I'll ask if you have given enough study to some of the simpler things. For instance, the study of a damper roller is an important item in successful lithographic press operation.

Covering Damper Rollers

If you make your own dampers, has the man who sews them been instructed properly as to how that little stitch in the seam should be made? Has the thread he is using been given consideration? Is he pulling a perfectly good piece of flannel or molleton to pieces in his sewing operation, thereby creating uneven dampers with excessive water in one place and not enough in another because of the holes? Has consideration been given to the storing of the materials so they are protected from moths and corrosive agents? Has the roller itself been painted at the core, thereby eliminating the liability of rust which causes corrosive action and swelling in different spots and which in turn causes uneven dampers? The story of a damper in itself is very interesting should you take time to analyze it in a minute way.

Care of Press Rollers

The press roller comes in for its particular care regardless of whether you are using the synthetic rubber or oxidized oil type. Using the proper cleaning solutions in washups, putting the rollers in storage in cool, dry and dark areas are worth considering. The rollers that are in operation should receive rigid and regular inspections. The setting and cleaning of rollers regularly are just as important as the maintenance care given to any part of the press.

Handling of Inks

Next we should consider the handling of inks. In many shops, small cans of inks are stored on shelves. These cans have been opened once or twice. Should you inspect them, you would find that the pressman has gouged out a few ounces of ink without leveling off the ink remaining in the can to prevent skin from forming on an uneven surface. This waste (if you could figure it out in dollars over the number of years you have been in the lithograph business) would astound you. Therefore, a method should be developed to fit your own plant condition so that the waste and spoilage of ink can be minimized.

Care of Paper

As you all know, paper is an important item in a lithograph pressroom. Everyone has his own ideas for handling paper, and of course I have mine. I will pass along to you some of the ways and means I have used. They fit in very well in our particular plant. To start with, we use the sword or paper hygroscope developed by the Lithographic Technical Foundation. It is used in the seasoning paper department, in the chemical laboratory and in the pressroom. We have established standard methods for the use of this instrument and if there is any great change in the paper, it is immediately detected before going to the press.

Fortunately for us, our paper seasoning room and the pressroom are air conditioned and we have a reasonable control of the moisture content of all paper we use. Nevertheless, even though you might not have elaborate air conditioning equipment in your plant you can develop ways and means of telling what the paper condition is, thereby establishing certain standards that will fit into your own lithograph conditions. We are particular about how the paper is stored. The seasoning of paper is scheduled to a given formula of time so that most all of our paper arrives in about the same condition at the press. This is essential when one has established standard formulas for inks, grain of plates and formation of screen dots in the various types of art work. Having built our material standards so that one fits with the other, you can easily understand that if the paper should have a terrific variation in moisture content, it would immediately upset other operations. By this I mean our makeready standards, our press grains, our pressure adjustments, our roller and damper adjustments and the viscosity and tack of our inks are all built around one another so that the paper automatically becomes a part of the complete lithograph system.

Standardizing Makeready

Standardization methods should be in operation for your makeready system. If transfers, whether made by hand or photo-composed, have been laid out absolutely square and the plates measured accordingly, the pressman is thereby enabled to get the register within a few minutes rather than a few hours because someone in the platemaking department neglected to be exacting enough in his layout work. The positive setting of rollers, pressure and dampers can be done by a formula method and each man in the department trained accordingly. This will not only help to increase the efficiency of the makeready operations but it makes every man responsible for his particular job. Where the formula method is used in preparatory operations, each individual feels that the other fellow has done the same as he would have done.

Educational Sessions

I think personal lectures to the men concerning this part of the job have proved to be of value in securing production results. The average worker in the pressroom is always willing to respond to an idea when he knows it is going to be for his benefit.

We also should lecture to our people about the shortages of materials and why they have to be careful. We have done this sort of thing and our employees have responded wonderfully.

Getting a Flexible Force

We also have endeavored to teach all of our men several different jobs by movs ing them from small single-color presse- to small two color-presses and then to large two and four-color presses. This same idea was employed with the feeders and helpers. We commenced to do this

(*Continued on Page 36*)

Editor's Note:

In diversifying the capabilities of his employees so that they may perform more than one particular kind of work, the production executive not only is providing production flexibility, but he also is making it possible to do the work at less cost. In this abstract, Mr. Machell discusses the importance of production standards and the human element in the printing plant. While the speaker's observations are pertinent to offset-lith plant operation, we feel that letterpress executives, too, can apply these principles for obtaining employee cooperation. The role of specialist in the printing plant may be an important one, but on the other hand there is a great deal to be said for the "flexible" employee.

Some Potent Things

the newspaper can put into effect to help along WPB's conservation program — Newsprint conservation suggestions — Getting in the brass scrap — Spend time with mechanical men

By LEON A. LINK*

*Newspaper Specialist, Printing and Publishing Division of the War Production Board. Abstract of address delivered before Hoosier Press Assoc. Convention, Indianapolis, Ind., February, 1943.

BECAUSE it was found possible to postpone the second newsprint cut, as announced recently by the War Production Board, we should not get the impression the newsprint situation is easing. Each day it becomes more important to make all possible savings in the use of print papers. Because of that situation I want to discuss several things we believe will contribute to that saving.

I want to suggest that more paper might be saved in the operation of many of your pressrooms, in the medium and larger papers, if you really make it your business to see that these savings are made. I am not implying that you have not tried. I am suggesting that a little more effect might make for additional savings. There are plants who are running unbalanced sections, causing the use of angle-bars in making press runs. In nearly every instance the use of angle-bars increases waste. Maybe you could plan your paper so that these runs could be eliminated. If your getting over-runs in your press room, possibly a little better cooperation between the press room and the mail room would reduce that waste. It might be worth while if you would go down to the tracks some day and see the cars unloaded, follow the truck to your plant and witness the unloading of the paper.

Every time you waste a pound of paper it means that there are three less 24-page papers that can be distributed to the reader. This figure varies a little, depending upon the cutoff of the paper. When additional restrictions become effective, this saving becomes more important.

Many of the larger newspapers have made substantial savings of print paper during the past several years by reducing the width of their pages. Several are now in the process of making that change. The same thing has been accomplished by numerous smaller papers. However, there are still a number that are using the wide column and unnecessarily wide rolls. This change presents some mechanical problems in the pressrooms and stereotype departments of the larger and medium size papers, but in no case, so far as we know, have they been unable to accomplish the change. It seems that there is an opportunity for paper saving in many smaller daily and weekly papers, if the same thing could be done. Certainly there would be advantages if weekly papers and the smaller dailies were standardized on 12 pica columns. If you are using a wider column I suggest that you explore the possibilities of making this saving in your plant.

Many weekly and small daily newspapers contain wider margins than are necessary. I know there must be sufficient margin for grippers and I believe I know something about the necessary mechanical changes involved in reducing these margins and in reducing the width of columns. Sometimes the greatest obstacle in accomplishing these things may be the fact that you have just not decided to do it. Maybe you have thought about it, but just have not got at it. It may be that some of the papers who have made these changes, did not do so, because they preferred the appearance of the narrower columns and narrower margins. Regardless of that, they did make the savings of paper. We know of no newspaper that has received special consideration in the making of typographical awards because they contained 13 em columns. On the other hand we do know of a number of fine appearing newspapers that have received special recognition upon their appearance, all of which were 12 em column newspapers.

It seems there is also an opportunity to make paper saving in the operation of your job departments in the smaller papers. We suggest that you consider the advisability of reducing the size of Sale Bills and other forms in which print paper is used. It may be better to produce smaller forms now, if by so doing, that will postpone the time when we may not be able to use any print paper for that purpose.

About two weeks ago I visited a weekly newspaper plant in Maryland. I discussed with the publisher the feasibility of changing from a 13 pica column to a 12 pica column. We also mentioned the reduction of margins that could be made. After checking the situation over, it was obvious that at least a 10% saving in paper could be made in his plant without reducing advertising space or reducing the number of papers distributed to subscribers. In order to do the job it will be necessary for him to purchase a new liner for his composing machine at a cost of $1.25. Without question he is going to make the change. If a weekly newspaper can make a 10% saving in print paper with an investment of $1.25 and not have to reduce his advertising or circulation revenue because of the change, it seems to me there is no good reason for him not getting the job done. So far the print paper conservation order does not apply to papers using under 25 tons each quarter. That provision eliminates practically all weekly and many small daily papers. Regardless of the fact that the order does not apply to the kind of newspapers mentioned, I believe that those of you who operate these newspapers and now use the wider columns and the extreme wide margins are just as anxious and willing to make the saving in behalf of the war effort as are the larger newspapers, most of whom have made the change some time ago. This is not an order from the War Production Board—it is simply a suggestion that I have every reason to believe you are going to give your immediate attention.

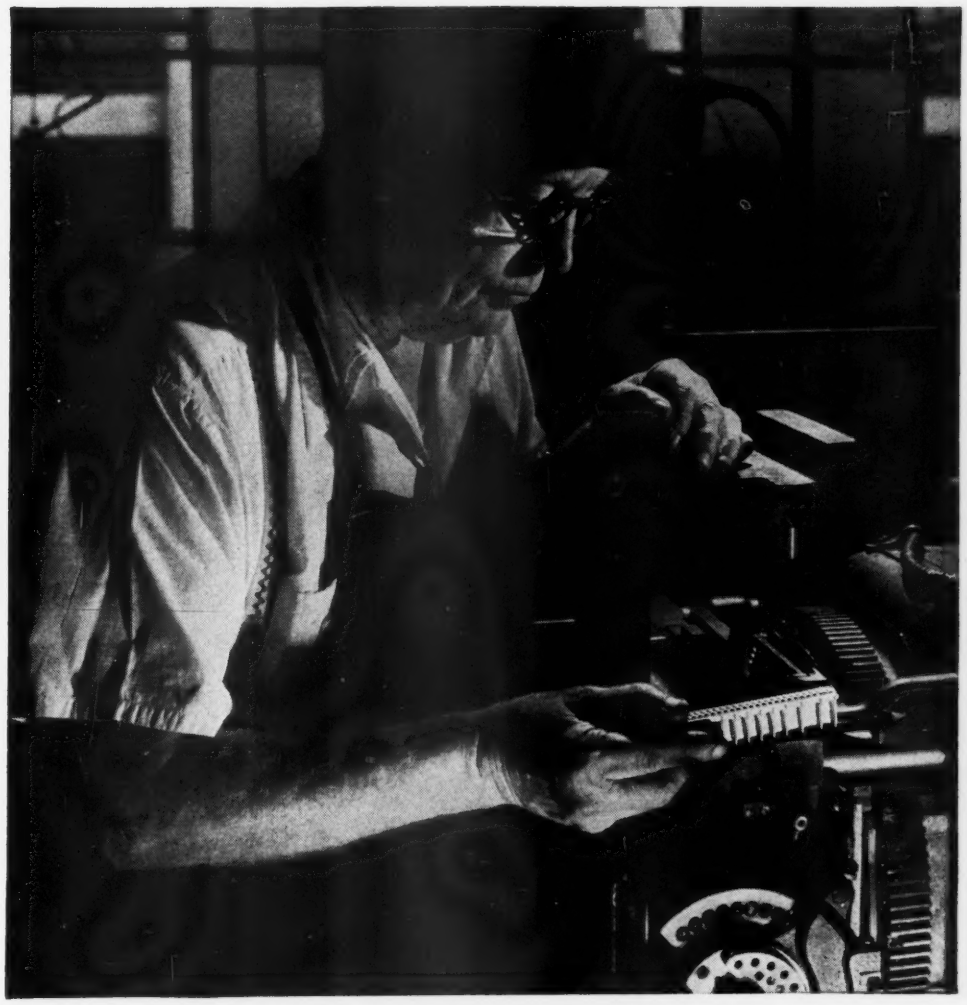
I want to close the print paper discussion by quoting the following from a recent release of the War Production Board:

> The publishers of small papers are expected to voluntarily make every possible economy in the use of newsprint. The elimination of campaign for new subscribers, the distribution of sample papers for promotion work, or other non-essential uses for the duration of the war applies to all newspapers, large, medium and small.

There are many items used in printing plants that might be covered by this order were they used exclusively in the industry such as screw drivers, punches, micrometers and other such items. Those kinds of items, however, are not included in Order L-226. Some of these items, not used exclusively in the industry now require a rating better than A-11. In that case, you will be required to file a regular PD-1A application in order to get clearance of the parts desired. Because of their general use in many industries they are restricted by another order which requires higher ratings than is automatically assigned to newspapers.

You have probably received a notice from one or more of the companies who manufacture typesetting and typecasting machine matrices urging you to immediately scrap all worn, damaged and obsolete matrices by sale to a recognized junk dealer in your locality. We in the War Production Board hope you will give this effort to reclaim the brass not now in use your full cooperation. There is a serious need for this material. You should get a receipt from the junk dealer to whom the brass is sold, showing the weight of the matrices desposed of. This receipt can be sent to the manufacturer from whom you purchase your matrices and will apply as a credit, in pounds, on the purchase of new matrices when you need to order new ones. Under the provisions of the L-226 order you will not be permitted to purchase new matrices unless you either

(*Continued on Page 36*)



Insure Victory—
Buy War Bonds
and Stamps
Regularly!

Who's *Your* Linotype Warden?

That's an important post, these days, and not to be overlooked.

Because of increasing governmental regulations and diminishing stocks of maintenance parts and supplies, wise Linotype owners are making sure that their machines are receiving the best possible supervision and care. More than ever before, they realize that this is not only a necessary precaution, but it's a definite economy—not an expense.

So, we ask *you*—"Who's *your* Linotype warden?"

★ ★

FIVE FREE BOOKLETS published by Linotype in the interests of users, are available upon request. They show many practical ways of caring for Linotypes, and discuss maintenance problems and their answers. If your set is not complete, send for any missing numbers. 1. Care and Maintenance of Matrices; 2. Routine Checkups, Cleaning and Lubrication; 3. Assembling; 4. Casting; 5. Distribution and Driving.

Set in Linotype Bodoni and Bodoni Book

Cork Conservation expedited by

Stereotype Superintendent who turns molding blankets sidewise after they have stretched sufficiently to cover length of page form. Life of blankets increased 100%

By EARL COLE*

*Stereotype Superintendent, Wilkes Barre (Pa.) *Times-Leader-Evening News.*

ALL newspaper mechanical executives have become conservation conscious within the past year and a half. They have been devising ways and means for extending the life of replaceable supplies used in the plant. This observation is particularly true of stereotype foremen who have been trying harder than ever to do everything possible to help win the war by maintaining correct metal temperatures and machine adjustments and by careful handling of those supplies which may become more critical as the war progresses. The reason for all this extra care is that WPB has intimated through its various orders that we are working on short rations of many of the available supplies. It is true there has been no actual shortage of certain supplies, but the national state of mind causes the newspaper executive to think in conservation terms of every item used in the plant.

We have been told there is a three years' supply of cork for stereotype molding blankets in this country; then we have been told the cork supply is getting critical. We have been warned that the supply of steel for fabricating pouring sheets used in our casting boxes is diminishing—then we hear plenty of steel will be available. We have been warned by manufacturers to conserve the use and adjustment of the usual replaceable machine parts. As a consequence, all of our thinking has been in terms of non-expansion and conservation.

One of our efforts has been devoted to increasing the length of life of stereotype cork molding blankets. By simply placing the blanket at right angles to its usual position on the form after it has stretched sufficiently to cover the lengthwise dimension of the form, we have succeeded in doubling the number of molding operations as would be the case if we only utilized the blanket in one direction.

Previous to "fussing with" the idea of alternating the position of corks on the form, we used them in one position only, as explained above, and discarded them after the fractures extended inwardly far enough to affect the molding of the type area of the form.

The molding blanket always travels in the same direction in which the form is rolled in the molding machine, irrespective of turning the blanket end-for-end on the form. All newspaper page forms are rectangular in dimension. Our new cork blankets are 21 in. by 25 in. when we start using them. After approx. 300 impressions, the 21 in. dimension has stretched sufficiently to cover the 25 in. length of the form. We then turn the cork around to a right-angle position on the form. Repeated use of the blankets in this manner has doubled the number of molding impressions secured from the blanket when used in one direction only.

Our chases originally were built for seven 13-pica col. width. Later they were modified to accept 8 col., 12½ picas wide. Still later, we went to 12 pica col. with 4 pt. col. rule. We now use a segment bar inside the chase to make up for the narrower width, so it can be seen that our chases really are wider than necessary. The overall dimensions are 26¾ in. by 23¼ in. The inside dimensions are 21½ in. long by 99½ picas wide, or approx. 16½ in. There is a 3/16 in. bolster all around inside the chase. Since we do not have Autoplate equipment in the stereotype department we do not have wide bolsters in the chases. We secure 9/16 in. mat shrinkage and use a manually-operated Stahi former with an automatic attachment on the lever controlling the vacuum.

When starting to use the blanket in the new position, it is necessary to ease off the cylinder impression slightly, by turning the adjusting screws one notch. The screws are graduated in 0.010 in. dimension. We use a Goss roller molding machine.

Repeated moldings in the usual manner, of course, stretch the cork blanket and cause it to pack down and become thinner than when new. By reversing the position of the blanket, air cells apparently are established between the ground cork particles and the binder used to hold the particles together. Continuous rolling in one direction, in some manner, sets up a direction of grain lengthwise of the blanket. Now, when the blanket position is changed, a deformation occurs in the cork structure in such a way that the blanket is given a new resiliency or cushion effect by means of air cells which enables the stereotyper to obtain as many additional molding operations as are obtained from use of the blanket in one direction only.

The writer feels that this means for extending the life of cork blankets is well worth passing on to others. In any event, it will forestall some of the proposed eccentric and hazardous newsprint molding combinations we have been hearing about in case cork really becomes critical.

In molding, we use a masterpiece creeper, a ¼ in. hard cork and a steel sheet 0.018 in. thick. (We call this "stovepipe material" and it is obtainable at the larger hardware stores.) Incidentally, a water-soaked sponge is applied to the edges of each cork every day before using.

In our experience here at the *Times-Leader*, we have not found that the change in the molding direction of the blankets with the compensatory roller adjustment has crushed any of the form elements. In fact, the slugs, type and rules stand up as well as though the blankets were used in the usual manner.

This brings up another thought. If the supply companies could furnish cork blankets cut either to 24 in. or 25 in. by 25 in. size, depending upon the page size used by the purchaser, the stereotyper could adapt this molding technique at the start. Then, too, there is no question in my mind but what the life of a cork blanket could be extended considerably.

TECHNICAL LITERATURE

Production and Mechanical Executives wishing to secure copies of the literature described below may do so by addressing the manufacturer direct, or by sending request to Printing Equipment Engineer. ***We'll be glad to pass your request on to the manufacturer. Literature is gratis except where noted.***

"Sacred Cows"

HOW MANY SACRED COWS ARE YOU FEEDING? is the title of a little 12 page booklet, 6 in. by 9 in., published by Mergenthaler Linotype Co. By checking a list of 18 "sacred cows", newspaper executives may consider whether or not their continued use is warranted in face of the necessity for conserving newsprint in terms of editorial, and composing room practice. Free for the asking.

2 and 4 Color Wet Proving

A four-page letterhead-size folder, printed in black, red and blue with illustrations has been published by Vandercook & Sons. In the folder are discussed and illustrated the No. 212 and No. 604 wet proving machines for two and four colors respectively.

Rubber Plus Skill Equals Good Printing Plates

Starting off with the assertion that "Wartime plates can be good plates!" Ideal Roller & Mfg. Co. has issued a 6 page folder in which it advises platemakers of the latest conditions with respect to rubber plate gums and supplies as the result of war conditions. In addition, new synthetics and the molding of synthetics are discussed, as are rubber stamp material and Ideal rubber plate adhesive.

ATF Employees Participate in WPB Awards

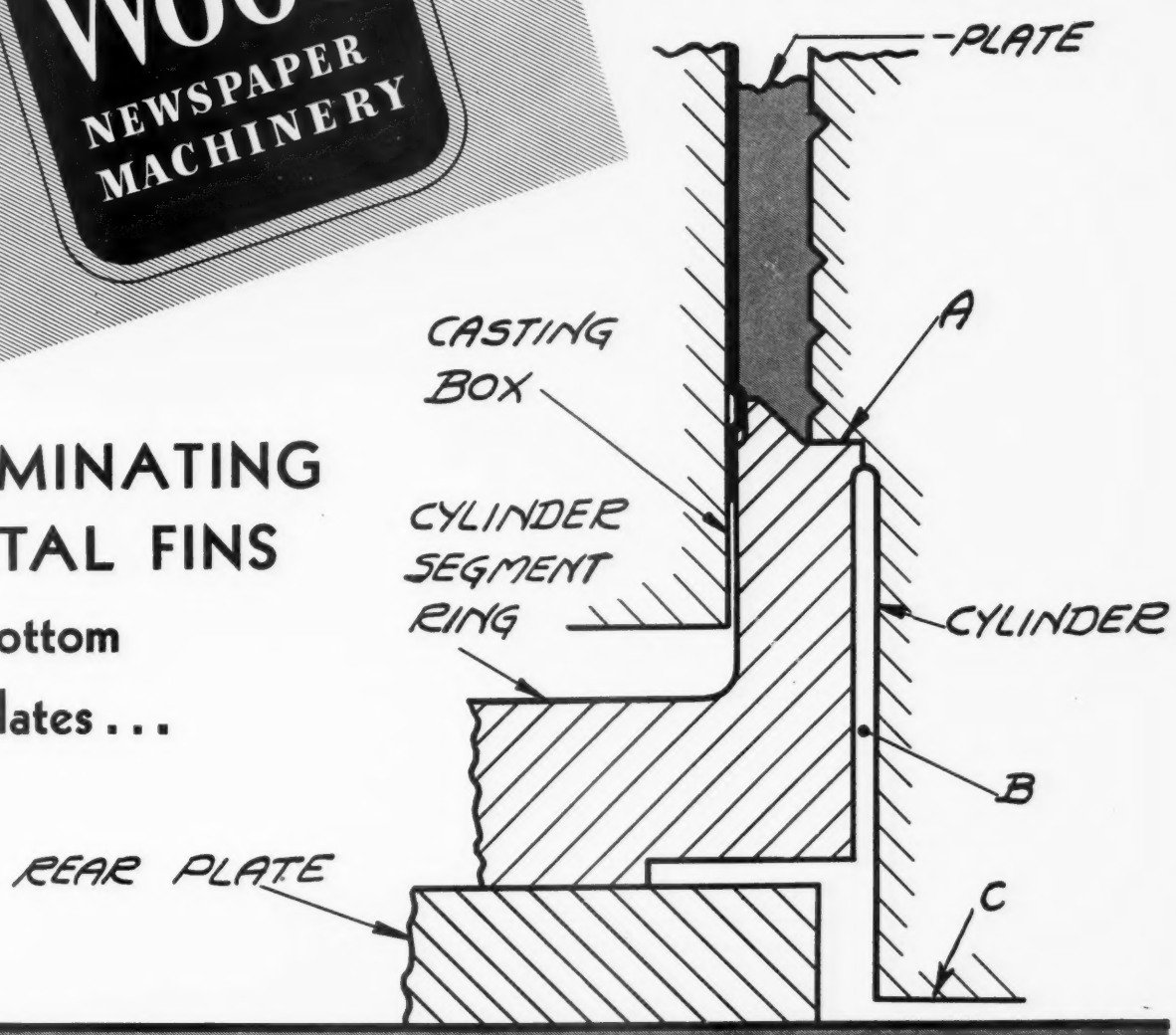
FOURTEEN employees of American Type Founders, which company is engaged heavily in manufacturing war equipment were awarded 2 certificates and 12 honorable mentions by War Production Drive Headquarters, Washington. The awards were made in recognition for suggestions from war workers which have proved to be valuable in saving man-hours and critical materials, or in improving or increasing production. Announcement was made on February 22. All but one of the awards were made to employees of ATF's Cowdrey Machine Division in Fitchburg, Mass., the other being made to an employee of the plant in Elizabeth, New Jersey.

Another Maintenance Hint from

Wood
NEWSPAPER MACHINERY

for Autoplate users . . .

ELIMINATING METAL FINS at bottom of plates . . .



After several years of severe service, — wear may cause Automatic and Junior Autoplates to cast a "fin" at the bottom of the plate. (Where the cylinder rests on the segment ring, marked "A" in diagram above). As long as the "fin" is small, the trimming tool on the Autoshaver cuts it off.

But if the "fin" becomes heavy — remove the cylinder and face it off at the bottom, where it rests on the ring. If it is necessary to face off *more* than about .006", then the *bottom* of the cylinder (marked "C"), should also be faced off to maintain clearance.

"Stiffness" of cylinder, in revolving, may result from accumulated metal dust in the space (marked "B") between ring and cylinder. Periodically, remove segment ring — and clean out this space and bottom of cylinder thoroughly.

(Add this to your file of the current Wood Maintenance Series)

WOOD NEWSPAPER MACHINERY CORPORATION
PLAINFIELD, NEW JERSEY NEW YORK OFFICE: 501 FIFTH AVENUE

BOOKS
RECEIVED

Eye-sight Conservation and the Printer

IT is a prime responsibility of the printer to assist in eyesight conservation in producing printing. Many designers of printing, printers, layout men or those having anything to do with the creation of printing, especially printing designed for "mass" reading, will experience somewhat of a shock after perusing *Reading As a Visual Task*, the new 428 page book by Matthew Luckeish, D.Sc., D.E., and Frank K. Moss, E.E., which has recently been published. Readers of the book will find that many "sacred cows" commonly accepted as fact are proved fallacious. Belief in these "sacred cows" has been accepted as fact because no one has proved them untrue until now.

The reason for making this observation is that designers and planners of printing, in creating printed matter, often follow their own inclinations with respect to design as dictated by personal experience and without observing scientific principles which make for reading ease. As a matter of fact, little usable scientific literature has been generally available upon the subject. It is acknowledged that no adequate review of the book can be given in a brief space nor without sufficient time in which to digest it properly.

The book, *Reading As a Visual Task*, is a carefully worded report of the scientific investigational work conducted by Luckeish and Moss over a long period of time upon the factors making for ease of reading in relation to the elimination of eye fatigue. Type faces, length of line, leading between lines, paper, ink, method of printing, and lighting are some of the factors upon which the investigational work is based. The text of the book is such that the language of the research scientist and the technician in the Graphic Arts have been brought together. In other words, the authors have couched the terms used in the book in printer's language, so far as possible. We feel that producers of printing should examine this book because without doubt it is going to have a profound effect upon the planning of printing through scientific means. If producers of printing do not accept the principles of optimum reading ease as demonstrated by the authors, then we feel that as the result of pressure to be brought a little later by optometrists, oculists, psychologists, physicists and others who are working in the field, they will be compelled to conform to the idea that it is and always has been a responsibility of anyone connected with the production of printing to plan it strictly for eyesight conservation. Thus it would seem that creators of type faces, printing planners and printers themselves have an opportunity in the field of eyesight conservation.

Our readers may have gained some idea of the importance of eyesight conservation as the result of publication in several past issues of *Printing Equipment Engineer*, of editorial references to preliminary reports of the work done by Luckeish and Moss for Matrix Contrast Corporation and Mergenthaler Linotype Company.

In *Reading As a Visual Task* it is asserted that we are literally becoming a nation of optical cripples. We are distinguished by our slavery to near-vision. Defective vision is extremely prevalent. Apparently, only about 3% of school children have so-called normal vision; at the conclusion of high school from 15% to 25% have common eye defects, according to the accuracy of diagnosis; the percentage continues to increase so that 40%, or 40 out of every 100 college students, have defective vision. In the work-world, 48% of persons between 30 and 40 years of age have defective vision. The percentage rises as age increases so that 71% of people between 40 and 50 years have defective vision.

The Blink Test

In their researches, the authors feel that high readability apparently is not possible without high visibility. High visibility, however, does not always guarantee high readability. Speed of reading is not an acceptable criterion of readability. A major research activity of the authors has been to develop knowledge pertaining to ease of seeing and to develop a practicable criterion. The method adopted for securing this criterion centered around the rate of involuntary blinking of the reader's eyes for each line of type as recorded during specific reading periods. That is, the increase in eye-blinking progressively toward the end of a reading period proved to be useful criteria in appraising the relative degrees of fatigue induced by the performance of exacting tasks under different visual conditions.

From time to time, we have heard typographers express preferences for certain type faces, or even a series of one type family. Opinions have been expressed by prominent typographers, apparently based on personal preference, as to the utility of other-than-text type faces, many of them being regarded as suitable only for brief display lines, because it has been thought they are "hard to read". For this reason, the chapter on *Type-Face* will be of interest to typographers, composing machine matrix manufacturers and type founders. The relative visibilities of a number of type faces are presented in a table. Each line in the table is set in 8 pt. size of the particular type face indicated. Bodoni Book was selected as the basis for the comparisons in visibility because of its wide use in typography. The visibility for 8 pt. Bodoni Book is given as 3.65. In comparison with Bodoni Book (3.65), Sans Serif Medium has a relative visibility of 3.86, Cheltenham Wide 3.67, Heavy Copperplate Gothic 3.74, Goudy Antique 3.88, and Cochin Light 3.73. By comparison with Bodoni Book, (3.65), Cheltenham Bold has a relative visibility of 3.96 and Garamond Bold rates 4.33.

With respect to the Memphis family of type faces, the authors have determined that the maximum degree of boldness in relation to legibility is reached in Memphis Medium. Beyond this (Memphis Bold and Extra Bold) the legibility decreases.

Leading and line-length are discussed in one of the chapters. Certain factors influence readability materially without appreciably affecting visibility, if at all. For example, line-length and leading affect readability considerably, even though they do not measurably affect visibility.

Data obtained as the result of a test conducted among 24 people who read book composition consisting of 10 pt. Textype proofs with 2 pt. leading, and of different pica widths (from 13 to 29 picas) under controlled conditions indicates that the 13 pica matter provided the greatest readability. In the opinion of the investigators, the results obtained from this test are particularly interesting from the viewpoint of newspaper typography since the line-length is approximately the same as that in common use.

The chapter on papers and inks will be a source of information to the user and producer of both. In the investigational work conducted by Luckeish and Moss, paper and ink must be considered an integral part of the objective of providing complete data on the subject of reading ease. The reading qualities of various kinds of white and tinted papers were investigated rather thoroughly.

Several researches have been conducted with the blink-test criterion. These tests did not indicate readability merit for any tinted paper. Papers having decided tints or colors are unfavorable factors from the readability and visibility standpoint.

Owing to the associated factors involved in the researches connected with different kinds of paper it is not possible to describe the results obtained in this brief space. However, as is stated above, this chapter should be of particular interest to all producers of printing and paper-makers in particular.

In the chapter on *Various Duplicated Materials*, the printing and duplicating processes are discussed all too briefly. The investigators' approach, of course, is confined entirely to the objectives of their researches. In the duplicating methods, the visibility and readability of duplicated materials seem to lose their chief utility when they are produced in such length as to require long reading periods. In addition to a more thorough discussion of the letterpress and offset printing processes, we feel that the results obtained from investigating gravure would be highly interesting. In the light of the researches already conducted, one is intrigued by the prospect of the results to be determined by such investigation.

In the concluding discussion-chapter, *Specifications for Optimum Readability*, the important factors making for optimum readability are summarized, including

(*Continued on Page 37*)

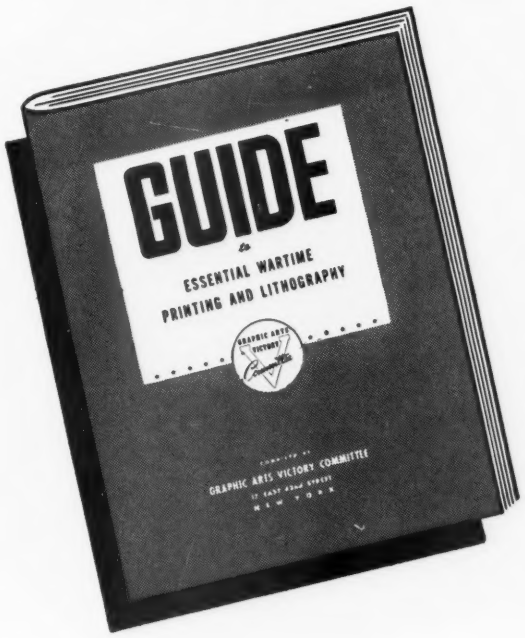
Yes... the Graphic Arts Victory Committee is definitely "on the way."

Since its inception in March of 1942...it has grown and grown in scope and activity. First, it had to obtain approval of its plans from WPB and OWI. Then, there were long months of planning, research, financing and organization. Three months were consumed in collecting the information for the GUIDE BOOK—and in getting the manuscript and page proofs "cleared" for accuracy through the Government Agencies concerned with Victory Projects...including OWI—OPA—ODT—DH&W—OCD—WMC—Treasury—Commerce—Agriculture.

But . . . now the GUIDE BOOK is finished—64 pages of vital information, showing how printed promotion can be converted from its peace time practices . . . to an all-out bulwark of support for the war effort. The GUIDE BOOK lists all sources of information on every project requiring printing and lithography.

The "talent committee" has already produced a "Convention-by-Mail" manual to assist the Office of Defense Transportation. The "talent committee" has completed a project for the Rent Control Section of OPA—and printers will be asked to show their customers dummies and suggested copy for "printed promotion." A new project for the "V Homes" program is now in the works.

Local committees are being organized all over the country under the guidance of R. Reid Vance, President of the Graphic Arts Trade Association Executives. Meetings are being held...many more are scheduled. The Graphic Arts industry is demonstrating that it can *convert itself* to the war effort.



All participating members of the G.A.V.C. are receiving the Guide Book, Convention manual and other project releases as published. If you are not yet participating, get in touch with *your local chairman* or arrange for your active participation through Harry Porter, Chairman of the Finance Committee, c/o Harris, Seybold, Potter Company, 4510 East 71st Street, Cleveland, Ohio. For Program information write to the

GRAPHIC ARTS VICTORY COMMITTEE
17 East Forty Second Street, New York City

This manual is now being offered to Advertisers and Agencies in advertisements appearing in Printers' Ink, Salesmanagement, Advertising & Selling, Advertising Age, Tide, and Industrial Marketing. Get your copy by becoming an active participant in the G.A.V.C.

ADVOCATES *making 50% Engraving Zinc do 100% job for newspaper line and halftone work*

By ELMER HODGKINSON*

*Stereotype Superintendent, Oklahoma City Publishing Co., Oklahoma City, Okla.

THE total zinc consumed by the photo-engraving industry is approximately 5000 tons yearly. Newspapers use about 60% of that tonnage, or 3000 tons. Now, considering the 50% cut in zinc by weight over the base period which went into effect February 15, it is possible for newspapers to make that 1500 tons do a 3000 ton job.

I believe this is the solution for making 50% zinc do a 100% job. By using a 0.032 in. cardboard or pressboard to bring the cuts up to 16 gauge thickness, we can still use the standard height base for the 21 gauge (0.032 in.) zinc. Under this procedure, it would be unnecessary for newspapers to cut down their illustrations.

In investigating ways and means for conserving zinc, we have tried using both the top and bottom of 0.064 in. zinc and find there are a lot of man-hours involved in this work; also we find a lot of zinc is unsuitable on the reverse side for etching purposes and in such case it is impossible to make a good cut on the bottom side. The trouble with the 18 gauge zinc is that you save only one-third more area for the same amount of weight, and its use requires the keeping of different heights of base—thus causing some confusion and extra work.

With the 0.032 in. zinc and the 0.032 in cardboard backing, however, you get 100% more area and use the same old base height, as in the case of the 16 gauge zinc. It is true that some of the line cuts on the 0.032 in. zinc will stretch if molded too many times. But line cuts are less than 10% on newspapers and the stereotypers can mat and cast those without losing any of their printing value.

I may venture to suggest that if the molding cards are a little over thickness, say up to 0.005 in., it would not matter. In fact, it could be of added value in reproduction.

You can readily see by these changes that between conservation and expenditures of zinc material, we have achieved the responsibility of our fifty-fifty proposition, and still continue production of newspaper illustrations without any interruptions.

21 Gauge Zinc *for both line and halftone engraving plus laminated backing board conserves zinc in Florida newspaper plant — Direct pressure stereo molding*

By H. R. CAPPS*

*Jacksonville (Fla.) *Times-Union.*

IN compliance with an order of the War Production Board and in keeping with the firm's policy of conserving materials vital to war needs, the *Florida Times-Union*, Jacksonville, Fla., adopted 21 gauge (0.032 in.) zinc for the production of halftone newspaper illustrative cuts, thereby securing a saving of 50% in the metal.

First came the problem of basing these cuts to the proper height. Having on hand an adequate amount of steel base and machine-cast strip material of the 0.853 in. height and to avoid confusion in handling an extra standard of basing material, an underlay for the 21 gauge zinc was decided upon.

Fiber board being non-essential to the war effort, it was selected for the experiment. As a thickness of 0.033 in. would be required as an underlay to build the 21 gauge zinc to form a combined thickness of 0.065 in., the next problem was that of procuring fiberboard of the required thickness. It was found that a local paper supply house could furnish fiber press-board in 0.012 in. and 0.021 in. thickness, or a total thickness of 0.033 in. The supply house further agreed to cement under pressure the two into a laminated sheet of 0.033 in. thickness.

This laminated underlay is in turn fastened to the base of the etched cut before it leaves the engraving department in this manner:

Before cutting apart the etched page-size plate is laid face down on a sheet of 0.050 in. art board (the art board protects the face of the cut when it is put under pressure in the cementing process); a thin coat of cut cement is spread evenly over the entire back surface of the etched zinc plate and the underlay is laid over the zinc with the concave side next to the zinc (if the fiber board be curved or warped). While still resting on the art board it is placed in a Washington hand press and pressed firmly down and allowed to remain under pressure for 10 or 15 min. The backed-up zinc plate may now be cut apart if there is more than one cut in the assembly.

While the original plan was to use the 21 gauge for halftone cuts only, the engraving department has produced combination line and halftone layouts and line cuts very successfully and the plans are to adopt this method of producing all cuts used in connection with the newspaper.

Some difficulty is encountered, however, where routing below the surface of the zinc is required, such as the dulling of the router bits. The press board being of a fibrous nature, tends to "fuzz up" unless the bit is very sharp. Scorching the press board in a mat former improves the routing qualities. All line cuts are etched to a depth of 0.025 in. and no routing is required where the lines are spaced less than ½ in. apart. Seldom is it necessary to rout below the lower surface of the zinc.

Contributing to the *Times-Union's* success in using the 21 gauge zinc are direct pressure molding, careful backing of the stereotype mat, close fitting press cylinder sleeve bearings and semi-hard packing on the press.

First Vice President Burt D. Stevens of the Miehle Printing Press and Mfg. Co., passed away recently. He was born in Vassar, Mich., March 23, 1873. In 1911 he joined the Miehle Company. He was a member of the American Society of Mechanical Engineers, the Western Society of Engineers and the Chicago Craftsman's Club. He was a world-wide traveler, having visited Europe, where he made a study of the printing and lithographic processes and equipment. He also traveled through the Orient and many other countries.

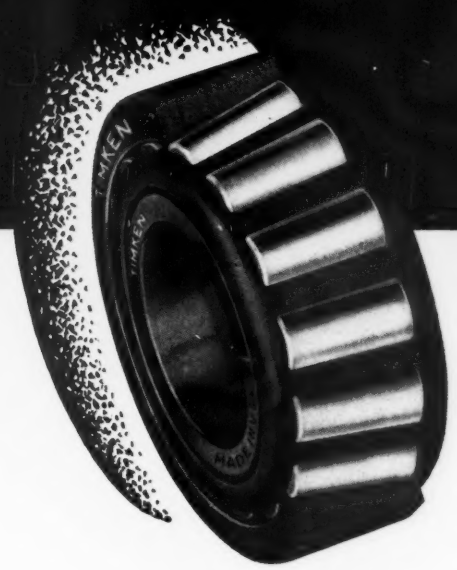
Welcomes Civilian Suggestions

In addition to the suggestions received from engineer soldiers, The Engineer School, Fort Belvoir, Virginia, will welcome suggestions from civilians throughout the United States. The regular idea list covering the range of subjects upon which suggestions may be submitted is rather long—31 items. However, in the case of civilians in the printing industry, The Engineer School announces it wants suggestions related to design, equipment and printing.

The suggestion system is more than a year old. To date, 11% of the submitted suggestions have been approved and put to use.

When an idea is submitted, it is copied and submitted to the critics without any indication of its source. Approval of an idea is not dependent upon rank or influence. Each adopted suggestion wins solely on its own merits.

Put your printing equipment on a Victory footing; use more Timken Bearings. This also will give you a big advantage under post-victory conditions.



TIMKEN
TRADE-MARK REG. U. S. PAT. OFF.
TAPERED ROLLER BEARINGS

"All There Is In Bearings"

Four Composing Machine Makers Itensify WPB's Drive To Get Old Matrices Into Scrap Channels

COMPOSING machine manufacturers are cooperating 100% with the War Production Board in observing the requirements of Printing Machinery Order L-226. In February, a letter was sent by four composing machine manufacturers to users of its machines, in which was explained the urgent need for recovering old and no-longer-usable composing machine matrices in relation to the war effort. The letter was signed jointly by the manufacturers. The participating companies are: Intertype Corporation, Lanston Monotype Machine Company, Ludlow Typograph Company and Mergenthaler Linotype Company.

The need for recovering scrap brass (copper and zinc alloy) is regarded seriously by the War Production Board. Particularly, the need for copper is critical. The composing machine manufacturers are cooperating with the War Production Board by notifying the trade of the seriousness of the need for copper and are explaining to machine users how they can assist with the copper recovery program with respect to turning in to scrap channels worn-out or useless composing machine matrices.

The composing machine manufacturers' cooperation with WPB in getting worn and obsolete brass matrices into scrap channels conforms in every way with the requirements for the return of discarded machine parts as stipulated in Printing Machinery Limitation Order L-226, published in the January issue of *Printing Equipment Engineer* on page 7, and the explanation of the amended order as published in the February issue. By aiding and abetting the scrapping of brass matrices, the manufacturers are intensifying consumer action on that part of L-226 which requires the return of discarded machine parts, particularly with reference to matrices.

Operation of the plan for turning in old matrices is simple. When a printing plant wishes to order some new replacement matrices, the matrix order is made out in the same manner as usual. The purchaser then certifies on the purchase order that within 30 days he will dispose of, through local scrap channels, a used part of similar kind and size for each new supply part received by him as enumerated on the purchase order.

Obtain Receipts for Scrap Matrices

At the time of selling scrap matrices to the junk dealer, the printing plant should secure from him a receipt showing how much brass scrap, expressed in pounds, has been disposed of. The receipt or receipts can then be mailed to the matrix manufacturer. The manufacturer receiving the receipts will credit you in pounds with the amount (by weight) of material disposed of on the purchase of new matrices as required by WPB Order L-226.

It has been suggested that where the quantity of old matrices is fairly large, the printing plant secure several receipts from the junk dealer, the total of which will equal the total amount turned in. "In doing this," it is stated in the joint letter sent out by the composing machine manufacturers, "you will be in a position to mail receipts to more than one of the manufacturers . . . and in that way you can establish credits with more than one."

Some concern has been expressed by executives of a few plants in which it has been the custom to dispose of matrices and other machine parts promptly. Because of this prompt disposal of discarded matrices and parts, plant executives feel they do not have a "credit cushion" upon which to work, especially those plants in which active matrix fonts have been permitted to become run down over a period of time without renewing the worn or damaged matrices which have been discarded from a font.

It is difficult, however, to conceive of any plant in which the equivalent weight of brass parts could not be found by a little searching investigation.

MERGENTHALER LINOTYPE COMPANY:

"Material for Maintenance, Repair, or Operating Supplies—Rating A-10 under Preference Rating Order P-100, with the terms of which I am familiar."

In accordance with the provisions of Limitation Order L-226, I (we) certify that within thirty days after the receipt of the new parts, supplies or matrices represented by the accompanying order, I (we) will dispose, through local channels, of a used part of similar kind and size for each new part or supply received by me (us).

.....
(Company name)

.....194....

.....
(Signature and title, if corporation)

Reproduction of coupon furnished in gangs of 10 by Mergenthaler Linotype Company. After a coupon has been filled out properly by the purchaser it is to be attached to his purchase order. Part of the plan undertaken by all composing machine manufacturers is to intensify Government's need for copper recovery through scrap matrices. When disposing of matrices to the junk dealer, be sure to get a receipt if the poundage is small. If the weight of the matrices sold to the junk dealer is large, it has been suggested that the seller secure several receipts the sum total of which will equal the weight of the amount of brass sold to the junk dealer. The printing plant especially if it uses more than one make of machine, then can send these to more than one composing machine manufacturer as a credit against matrix purchases.

MLCo's Explanatory Form Letter

To further familiarize its customers with the necessity for getting discarded machine parts and supplies into junk channels, Mergenthaler Linotype Company has published a four-page letterhead-size explanation of the procedure to be followed in purchasing its machines, operating supplies and replacement parts in accordance with WPB Limitation Order L-226.

On page 3 of the letter are printed 10 coupons which may be attached to the customer's purchase orders after properly filling in the blank spaces. One of the coupons is reproduced in connection with this article.

In addition, Mergenthaler Linotype Company is enclosing with each package of parts and supplies a small enclosure, 3⅜ in. by 5⅝ in., upon which is explained the Government's need for recovery of brass through junk channels. The request is made that old brass be turned over to your junk dealer.

Lanston Monotype Apprises Machine Users

In addition to the form letter sent out by the four principal composing machine manufacturers mentioned in the opening paragraph of this article, the Lanston Monotype Machine Company mailed to users of its equipment an informational letter regarding its particular equipment.

In the letter is described provisions in Order L-226 as Amended by WPB on February 10, wherein the customer may certify concurrently or on his purchase order that he will dispose of equivalent machine parts and operating supplies as itemized on the order within 30 days after receipt of the new parts and supplies.

The customer is notified that the company can sell and ship new machines only upon the approval of WPB. Reconditioned machines of all kinds, however, that have been out of the factory since May 1, 1937, may be sold and shipped.

Orders for matrices can be filled in accordance with the stipulations set forth in WPB Order L-226. In addition, all such orders must carry the A-10, P-100 certification, or list a definite WPB-approved certificate applicable to the plant of a particular job.

Molds sent in can be repaired by Monotype for users applying the A-10, P-100 certificate on their orders. If a customer orders an additional mold and does not have a used mold to return or exchange, then an application on WPB Form 556 must be filed in Washington by the buyer for authorization to purchase the mold.

Repair parts orders can be filled on the basis of the customer using the A-10, P-100 certificate. In addition, the customer must note on his purchase order

(*Continued on Page 37*)

PRINTING PATENTS REPORT

Covering patents issued January 26, February 2, February 9, February 16

This data is compiled exclusively for *Printing Equipment Engineer* by Invention, Inc., is verified in the United States Patent Office, and is comprehensive of all patents in the field of each heading for the dates specified.

For copies of patents listed here, specify the patent numbers and send 10c each (stamps not accepted) to the Commissioner of Patents, Washington, D. C.

Binding, Cutting, Perforating:

2,309,244. FOLDABLE PAGE INSERT for catalogs, magazines, etc. which is folded from the left and right margins of a page within the publication, each flap of the folder insert meeting centrally in precise alignment so that a display on the uppermost page of the insert is readable as a complete page in spite of being split in door-like fashion down the center. The insert unfolds to a sheet twice the size of the regular pages of the publication, on which a double spread of printed matter may be arranged. Invented by Harry J. Fey, St. Louis, Mo. Assigned to James R. Kearney Corp., St. Louis, Mo. Application June 1, 1942. 2 claims.

2,309,600. BOOK-STITCHER with novel feeding means including a stationary bar with a rooflike feeding edge in place of the ordinary chain roofs, and securing it above the ordinary chain feed. The narrow bar fits into the fold of the sheets to provide linear guidance of the fold edge and assure correct positioning on the saddle of the machine. During further feeding operations the sheets are kept in proper alignment by rollers the upper of which fits exactly onto the lower, and has lifting and lowering movements all in the feeding plane of the sheets, thereby not displacing sheets by its movement. Mechanism provides for entirely linear feeding and is said to increase output and eliminate waste sheets. Invented by Oskar Kleinschmit and Oskar Mueller, Leipzig-Plagwitz, Germany. Vested in the Alien Property Custodian. Application April 19, 1941. 21 claims.

2,310,838. PAPER CUTTER AND TRIMMER for small amounts of precise work where a razor blade or scalpel might be used; or where it is not desired to cut paper into two pieces, i.e., across its entire breadth, and thus a shearing-type of machine is not suited. Device includes a rod spaced above and parallel to a table top. Slidably mounted on the rod is a carriage which is provided with an upwardly extending handle and a downwardly extending razor blade carrying means. The cutting edge of the mounted razor blade extends downward between the two surface plate strips of an arm which is hinged at one end so it may be raised and so that a plurality of sheets of paper may be placed under it, clamped, and cut by hand movement of the carriage. Invented by David T. Helprin, New York, N. Y. Unassigned. Application December 22, 1941. 7 claims.

2,311,441. SAFETY DEVICE applicable generally to punching, stamping, or cutting apparatus and which embodies a beam of light focused on a photo-electric cell. The light beam spans the operative zone of the machine so as to be interrupted by the operator's hands. Interruption of the light beam operates a solenoid controlling the machine's clutch and renders the operating pedal ineffectual. Invented by Lloyd D. James, Seymour, Conn. Unassigned. Application November 1, 1941. 6 claims.

Composing Room Equipment:

2,310,709. TYPE TIE-UP used to hold members together in a composed form, and which constitutes a modification of patent No. 2,218,220. The earlier patent provides a novel slidable locking device for facilitating the making of electrotypes and stereotypes from conventionally composed type. This invention differs in that the typeholding frame is made of four strips of steel bent at their midsections to form V-shaped pieces with 60° angles and then joined together with spring steel clamps to form a rectangular frame which has four concave sides. When the frame is in use its sides tightly compress around the type and straighten out so that the corners are enlarged to 90° angles. Invented by John J. Riehl, Cleveland, Ohio. Unassigned. Application February 6, 1941. 7 claims.

Feeding, Folding, Delivery:

2,309,259. CARRIER TRAY OR WICKET of the type which is fastened to a continuously traveling endless conveyor chain for carrying lithographed or other coated metal sheets through a drying or baking oven. The wicket is fabricated from two complemental stampings of light gauge sheet metal and is hollow and has open sides. Thereby heat accumulated during passage through the oven is dissipated between the time of the wicket's discharge from the exit end of the oven with a heat-treated sheet and the time of its entrance into the opposite side of the oven with a freshly lithographed sheet. The fresh sheet will not become marked with a wicket burn as is often the case with wickets formed of solid bars or rods. Invented by Joseph W. Seigh, Teaneck, N. J. Unassigned. Application October 27, 1941. 4 claims.

2,309,662. SHEET HANDLING APPARATUS having improved means for properly positioning and holding each sheet during operation and insuring delivery of the sheets at the proper point. An improved gripper has a sheet positioning portion adapted to engage an edge of the sheet to position it on the carrier and a sheet holding portion to press the sheet against the carrier. The two portions are preferably fastened together so that they move together to and from operative position. Invented by Andrew Neuhart, Pittsburgh, Pa. Assigned to Miller Printing Machinery Co., Pittsburgh, Pa. Application May 15, 1941. 20 claims.

2,309,671. SHEET HANDLING APPARATUS for use as a delivery or as a feeder for a printing press. The apparatus has conveying means which can be moved to an inoperative out-of-the-way position without the complexity of previous apparatus. When the invention is embodied in a delivery, for example, and the delivery is moved away from the press to inoperative position, the conveying means extending from the delivery toward the press is automatically raised out of the way. Similarly, when the delivery is moved back to the press, the conveyor automatically moves back to its operative position. Invented by August A. Saul, Pittsburgh, Pa. Assigned to Miller Printing Machinery Co., Pittsburgh, Pa. Application August 23, 1940. 32 claims.

2,309,979. SHEET FEEDER for printing presses which provides means for accurately presenting a sheet to front registering stops in such a manner that danger of the front edge buckling or rebounding is minimized. The object is accomplished by a variable moving sheet transfer device with suction wheels which slow down the foremost sheet of the stream of lapped sheets as it approaches the stationary position adjacent the stops of the transfer device. The suction is cut off just before the sheet reaches the front stop and sheet is urged into final registered position. Invented by Howard A. Pritchard, Hiram, Ohio. Assigned to Harris-Seybold-Potter Co., Cleveland, Ohio. Application May 8, 1940. 20 claims.

(*Continued on Page 38*)

A

FIFTH

ANNIVERSARY

Just 5 years ago this month, BACKOTE was introduced by the Atlantic Zinc Works, to do away with the time-honored but wasteful and dangerous process of applying asphalt in the engraving shop.

When the war began we quickly changed from a metallic to a plastic backing to conserve chromium.

Today our reliable BACKOTE combined with A-Z ALLOY and ZOMO ELECTRIC ZINC are the choice of the majority of commercial and newspaper engravers throughout the Western Hemisphere.

You can order Zomo Electric Zinc and A-Z Alloy, with Backote from leading metal suppliers.

ZOMO ELECTRIC BACKOTE

A-Z ELECTRIC ALLOY BACKOTE

This War of Materials

affects availability of our everyday materials—Something about printing ink ingredients, allocations and end uses

By G. L. ERIKSON*

*Consultant, Printing Ink Unit, Chemicals Div., War Production Board, and Superintendent, Braden-Sutphin Printing Ink Co. Abstract of address delivered before meeting of Cleveland Club of Printing House Craftsmen, February 1943.

THIS is a war of materials—materials in unheard-of quantities. With our enemies well stocked after many years of preparation we, the richest country in the world, find ourselves short of materials. As an example of the difference in equipment being used in this war, we now need one truck for each 30 or 40 men in the army, whereas during the last war one truck served about 400 men. Think also of the many thousands of aeroplanes, tanks, etc., necessary to conduct this kind of war. These items alone create a tremendous drain on our materials resources.

Perhaps some do not realize how closely related the materials of war are to our every-day materials. It is not difficult to understand the shortages in steel as we see this material in the finished ships, tanks, guns and the like. The other metals which we use daily in printing are also important in the making of war equipment.

The same basic raw materials used for making drugs, perfumes, colors, dyes, etc. are also used for making explosives. From benzol we manufacture our best dyes, colors and many other peacetime commodities. Benzol is now also required in unheard-of quantities for military materials. From toluol we manufacture many of our best colors such as L.R.C., peacock blue, hansa yellow and many others, but toluol is also the raw material from which TNT is made. Phenol is used to manufacture resins for gloss ink and also an explosive called picric acid, used extensively in Russia. Glycerine is used in making printers' rollers and also nitroglycerine. Phthalic anhydride is used to produce beautiful colors but it is also used to produce some of the ingredients in smokeless powder. Chromium is used in making chrome yellow and for alloying steel for guns, ships and tanks. Cobalt is our most important dryer metal but it is also needed for alloying steel for guns. Lead is used in the manufacture of chrome yellow and I am sure you realize that plenty of lead must be propelled in the direction of our enemies in the form of bullets.

Toners for news ink and for black halftone ink are made from aniline oil which is also used to make tetryl—a torpedo explosive. Aniline oil itself is made from benzol. With the situation as critical as it is now, I know none of you would want to take away any torpedoes from our navy in order to put toner in your black ink.

Allocation

All critical materials are rapidly being brought under allocation control. Whenever it appears there will not be sufficient of any commodity to supply our armed forces and all civilian needs, this type of control is necessary to insure the flow of that commodity into the most essential uses.

The rating system has not controlled the flow of materials properly. This was due primarily to the fact that high ratings often were issued for a commodity in excess of the available supply of that commodity. This caused a scramble to obtain the material. As a result, some important war uses were not supplied because some less essential users had obtained all the material available.

Allocation control works something like this: All *producers* of each critical material report their production and inventories each month to WPB. This gives WPB a complete picture of how much is available for distribution each month.

All *consumers* of these materials are required to file applications each month stating their inventories, their requirements, and the end use to which these materials will be put.

Knowing how much is available for distribution, what the requirements are and the inventories, WPB can then allocate these materials according to the essentiality or the importance of their end use. All important military needs must be supplied first. Remaining quantities can then be distributed as far as they last according to the importance of the end use, giving due consideration to future military requirements.

End Use

End Use is an important term in Washington these days. Printers in general up to now have not been required to pay much attention to their end use, but this will become more and more important as materials become scarcer. Your suppliers, such as the paper manufacturers, ink makers, engravers, electrotypers, etc., will soon be requiring end use information in order to obtain some of their raw materials. Each of you should give a lot of thought to the end uses of your products in terms of how essential they are to the war effort and to the essential civilian activities.

In describing end uses, it is not enough to state that products are being used for army or navy contracts, but the *exact* use must also be given as it is necessary to determine whether a substitution could be made by using some less critical material.

To illustrate, shellac is a good example to discuss. Our supplies are very low and very little is coming in. Military uses have been cut about 90%. It is being used only where no other material will serve the purpose. In making aniline inks for printing on cellophane, shellac has been the chief resin used. But it has been necessary to reduce the amount to the bare minimum to get a result, perhaps not as good a result, but one which will serve the purpose for the duration. Otherwise the question might be brought up as to why it is necesssry to print on cellophane.

The question is one of whether it is more important to have printed cellophane bags or airplanes, because most of the shellac is now being used in airplanes and in electrical insulation where the peculiar properties of this material make it absolutely essential. A limited quantity of shellac will probably be made available to aniline ink manufacturers because it seems that a small amount is vital, but this quantity must be cut to the barest minimum to get a result.

The speaker discussed printing ink containers. He said there will be no more steel allowed for making kits or drums for printing inks. Black iron cans are now cut to 50% of the 1942 pack. Substitute containers made from wood, fibre, paper and glass will be used more and more. He also explained that the situation respecting oils and fats used in printing ink products has been growing continually worse due to the tremendous demands for foods not only for our armed forces, but for our allies. For instance, the hydrogenation of linseed oil produces a satisfactory fat similar to the hydrogenated cottonseed oils such as Crisco, etc. Order M-71 as amended January 7, 1843, prohibits the use of 17 oils and fats and their derivatives in printing inks. If an ink maker owned quantities of these less than 60,000 lbs. on Dec. 31, 1942, he may use them, but no more may be bought for use in printing inks. All oils and fats, including linseed and boiled oil, litho varnishes, tung, citicica, rapeseed and castor oils are now restricted for use in printing inks during any calendary quarter to 90% of the average quarterly use during the corresponding quarters of 1940 and 1941.

Mr. Erikson discussed pigments. He said that Order M-53 has been amended to remove certain restrictions on the use of color but printing ink manufacturers are now operating under Order M-103, the new dyestuff and organic pigment order which controls all color consumers.

He stated that up to now the changes and substitutions made by ink makers have been minor in nature, but many changes will be made soon which will be much more serious. During this year many of our best colors will be very scarce—some perhaps off the market entirely. All civilian uses of the most critical war materials will be discontinued because war needs must be supplied. Transportation and manpower are rapidly becoming a serious problem.

The HARRINGTON

DELIVERY SLIDE BAR and CLAMP

(Replacing Parts D1434 and D1436)

is another one of those "Star Improved Parts" which will help your machines come through the war period with flying colors.

Rugged teeth, cut at the top instead of the front of the bar, makes slipping of the Clamp an *impossibility*. The only replacements ever required are Springs for the Clamp—and this rarely. These bars on a battery of machines will mean the saving of many hours of manpower and many dollars in parts. As a measure of wartime economy in the Linotype Department, this replacement should have first rank.

Many hundreds of plants know the Harrington Slide, but to those who don't we say: *"Send for one on approval."*

Precision
TRADE ★ MARK
Parts

ACE BELTS
ARE TOPS FOR ALL LINOTYPE AND INTERTYPE DRIVES

LINOTYPE PARTS COMPANY

WEATHERLY, PA.
(Factory and Main Office)

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314 West 10th St.

CHICAGO 318 W. Randolph St.
MINNEAPOLIS 503 Fourth Ave., South
DENVER 1441 Blake St.

ZINK CUT CEMENT PRICES in the United States: 75c per large tube; $6.00 per dozen tubes; $5.00 per dozen tubes in gross lots.

Holds 'em Tight . . .

Since introduction of the thin-gauge photo-engraving zinc, the hazard of lost or misplaced cuts has been increased, particularly in those newspaper plants where thin-gauge engravings have not been brought up to the 16-gauge standard with backing materials.

Booth's Zink Cut Cement
holds any thin-gauge engraving with or without back (or any other kind of cut for that matter) to wood or metal base. Send 75c for a sample tube.

Booth's Black Rubber Rolls
for line-composing machine keyboards, we are happy to report, have not suffered in quality because of war conditions. Made particularly for fussy machinists and operators. Same diameter throughout their length when applied properly to the roll shafts. $1.45 per pair; $7.75 per dozen.

On and after April 1, please place on your purchase orders for Booth products the CMP Reg. 5 certification with the symbol AA-2X which has been granted to the printing and publishing industry for the purchase of maintenance, repair and operating supplies.

THE E. A. BOOTH RUBBER COMPANY
364 ROCKEFELLER BUILDING • CLEVELAND, OHIO

Participate to get the most out of mechanical conferences

By JOSEPH B. ADDISON*

*Pressroom Superintendent, Hartford (Conn.) *Times*. Abstract of address before New England Newspaper Mechanical Conference, Boston, October 1942, at which time Mr. Addison served as chairman of the Pressroom Clinic.

IT would gratify me greatly to be able to instill in the minds of my fellow workers a pride in their calling and a feeling that our work is a profession. There should exist among us a concerted course of action toward creating professional standards which would lend to our profession the prestige it merits.

Barring the fact that there is no set move among us to organize a condition of this kind, I believe it would be well if we would all resolve to bear in mind that we have within ourselves the power to build this business up or tear it down. In addition to this we should strive to become competent craftsmen so that we will win respect for our vocation.

It has always seemed to me that attendance at mechanical conferences can be made productive of thought which will lead us to become better craftsmen. I doubt if there are any who will deny that traveling and contact with others serves to broaden our minds. This is a finding which has been acknowledged for centuries back. In Boswell's *Life of Dr. Johnson* one can find mention of an old Spanish proverb to the effect that "He who would bring back the wealth of the Indies, must take the wealth of the Indies with him". So it is with traveling, a man must carry knowledge with him if he would bring back knowledge.

I am making mention of this quotation because I believe there are many among us who have gained considerable knowledge of this business. They fit in the category of this proverb. I maintain they can bring home knowledge from these meetings if they will cooperate wholeheartedly in the spirit that lies behind them.

My experience in this business permits me to observe the more or less dark eras within it—those periods in which the trade had many secrets when progressive advancement was greatly retarded.

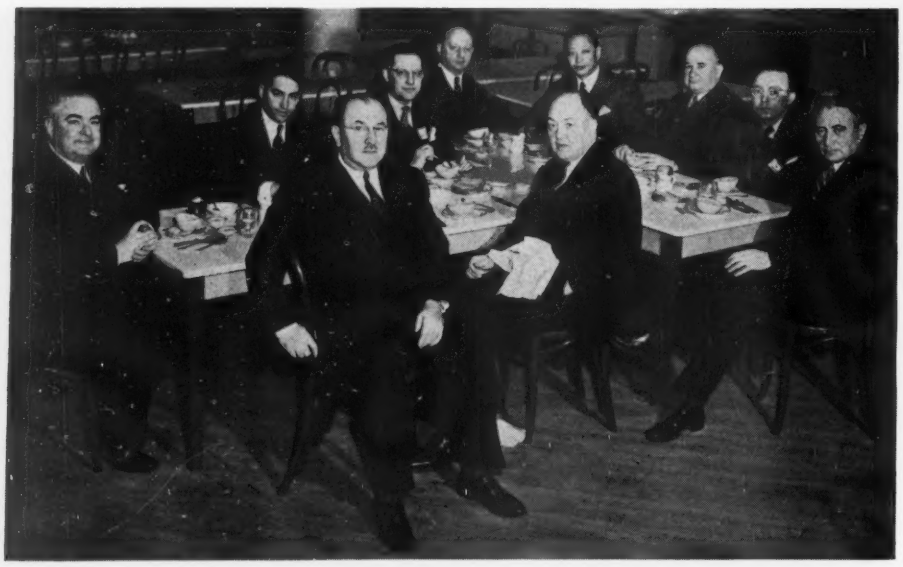
We are living in an enlightened age now. To keep pace with it, we must broaden our minds. We must hold our minds receptive to any angle of thought that makes for progress.

There would be more meetings of this kind if we could obtain the complete interest of all who attend. It is my impression that we do not succeed in doing this. I am implying no offense to anyone by believing there are some among us who are reluctant to share the knowledge they have gained.

It is my firm belief that any knowledge one may have gained is only of sufficient value to him to enable him to go forward. If one does not attempt to make it of value in this direction he steps aside so far as mental processes are concerned and lets the parade pass by.

It would help greatly if the attitude of reluctance to talk at these meetings could be overcome, regardless of whether it is because one does not want to share his knowledge or does not wish to make himself conspicuous.

In addition to this reticence upon the part of some, I want to add a warning to the effect that it would be well for all of us to guard ourselves against an attitude of complacency. It tends to make one underestimate others to the point of increasing his own vanity and it makes him blind to many avenues of thought which would be advantageous to him if his mind were open.



Dr. Hollington K. Tong, vice minister of information for China and escort of Madame Chiang Kai-shek in this country, was a luncheon guest of President Joseph T. Mackey at Linotype headquarters, Brooklyn, February 5. Present at the luncheon party, beginning at left and looking clockwise in this illustration were: Vice President for Overseas Reginald Orcutt; Manager of Overseas Division Henry J. Lucero; Editor Randall Gould of the New York edition of the *Evening Post* and *Mercury* of Shanghai; Eugene B. Mirovitch, Vice President for Latin America; Dr. Tong; President Joseph T. Mackey; Frederick B. Opper, associated with Mr. Gould; Editor John E. Allen of the *Linotype News;* Paul A. Bennett in charge of typographic layout, and Director of Agencies Walter B. Patterson.

Film Is Available to Graphic Arts Groups

"PRINTING for Victory" is the title of a sound slide film which has just been produced by the Miehle Printing Press & Manufacturing Co., Chicago, for release to Graphic Arts trade groups in conjunction with the Miehle Wartime Printing Library announced in the February issue of *Printing Equipment Engineer* last month. In black and white and running approximately 15 minutes, "Printing for Victory" is an educational film on the subject of wartime printing, and in it is described America's wartime problems and the help advertising and printing can offer towards their solution.

H. Andrew Dudley, Chief of the Campaigns Division, OWI, inspects Miehle Wartime Printing Library. The "Printing for Victory" film carries a direct appeal to printers and lithographers from Mr. Dudley for greater Graphic Arts cooperations in the war effort.

The film carries a direct appeal to printers and lithographers from H. Andrew Dudley, Chief of the Campaigns Division, Office of War Information, Washington, for greater graphic arts cooperation in the war effort.

Duplicate copies of the Miehle film, "Printing for Victory," have been made and Graphic Arts organizations that wish to show the film in conjunction with an exhibit of the Miehle Wartime Printing Library are requested to write the Miehle Printing Press & Manufacturing Company in Chicago, or to one of the five branch offices in New York, Boston, Los Angeles, Philadelphia and San Francisco.

WHAT'S AHEAD
for printing production?

WE wish we could look into a gazing ball and see there the war-induced production problems that will confront mechanical and production executives in the printing industry during 1943.

No doubt there will be some—a few have already come upon us, and as the year grows older, production problems will increase. To users of type metal we can predict—you will be foresighted to tie up with the most dependable type metal manufacturer you can find.

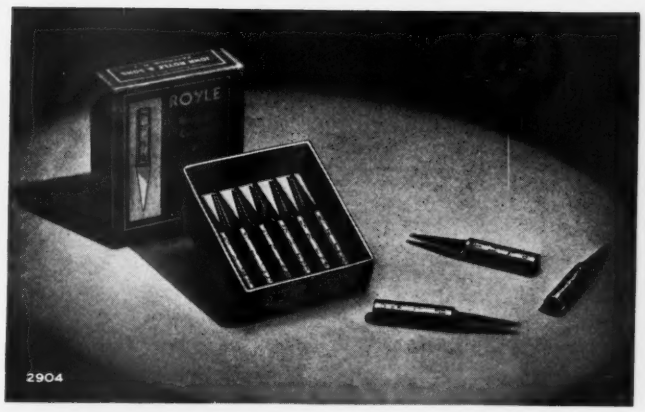
Imperial offers you the services and products of a firm making metals for the graphic arts exclusively. Included among our services is the Plus Plan for systematic analysis and correction of your metal supply to keep it in perfect balance. Benefits are lower fuel costs, minimum dross, and no machine shut-downs due to faulty metal. Why not make your next order read IMPERIAL?

IMPERIAL TYPE METAL CO.

Serving The Graphic Arts Industry Only

PHILADELPHIA NEW YORK CHICAGO

Imperial



ROUTING CUTTERS THAT CUT!!

Choose Style According to Use

Styles	*Blade Sections*	*Recommended for*
A		Electrotypes, stereotypes, wood
B		Zinc
C		Brass
D		Electrotypes and copper
E		Copper (Steel at reduced speed)
F		Zinc (Reinforced blade)
G		Brass (Reinforced blade)
H		Copper (Ground below center)
L		Zinc (Long blade)
M		Wood veining (No taper)

All Royle Routing Cutters reflect advantages gained through more than eighty years' experience in making these tools. We promise no miracles, but offer a complete line of cutters in every respect the finest that sound design, fine material and expert workmanship can produce. *Order Direct Or Through Your Dealer . . . Be Sure It's a Royle.*

Write for catalogue 425

ROUTERS · TRIMMERS
BEVELERS · SAWS

JOHN ROYLE & SONS

8 ESSEX STREET PATERSON, N. J.

EVERY SUPERINTENDENT *should have his own copy of New Guide to Essential Wartime Printing and Lithography — Graphic Arts Victory Committee publishes only complete record of Government public relations tasks and ways and means of assisting in extension of the work*

By CHAS. V. MORRIS*

*Wm. E. Rudge's Sons (House of Rudge), New York, N. Y.

IF any totally sales-minded printing trade executives are going to insist that this "back door" approach to creating interest in the Graphic Arts Victory Committee's *Guide to Essential Wartime Printing and Lithography* is entirely misplaced effort. We will take exception right here. Your reporter insists that printing plant superintendents are sales-minded enough—cognizant of their stake in sales promotion—and are as essentially patriotic as any vice president in charge of sales or any sales manager. Rushing, roaring presses are as much a rhapsody to the superintendent in any plant as are the chiming notes of the register to the sales folks—and we dare them to say "nay".

That's why *Printing Equipment Engineer* is among the first to herald the completion of the greatest task that faced the Graphic Arts Victory Committee in

its early months of active cooperation. The *Guide to Essential Wartime Printing and Lithography* is positive evidence of the Committee's country-wide effort to coordinate and gear the printing and allied trades for an all-out-war contribution of time, talents and equipment. The *Guide* is not alone a volume edited in behalf of the industry in which it found creation—though substantially, that is its purpose. Rather it is a handbook of all essential and important Government information and information-sources for advertising and sales promotion men who would tag their activities to the Government public relations tasks.

As such, your reporter persists in the reasoning that you, Mr. Superintendent, can carry word of the *Guide's* readiness right to the very men in your plant who can use it best. You can sort of tip 'em off—because you know about it before they do. Don't lose a second, then, in getting off your own request for your special private copy of the *Guide to Essential Wartime Printing and Lithography*. Write Henry Hoke, Managing Director, Graphic Arts Victory Committee, 17 East 42nd street, New York.

All this prodding, Mr. Superintendent, because there's a job waiting to be done by printing and lithographic salesmen with ideas—and these ideas can be created *only when the creators know what is needed*. The *Guide* discloses the need for private advertising support for every one of the 15 major government Victory projects—tells the story in the exact and approved words of Government of fields in the Office of Price Administration, War Production Board, Office of Defense Transportation, War Manpower Commission, Treasury Department, Department of Agriculture, Department of Commerce and the Office of War Information. Not only cites the publicity assignments of each department, but goes on to illustrate the material, posters, booklets, bulletins available in each office; gives names and addresses of information sources, both Government and private, concerned with carrying each project's needs to 130,000,000 Americans.

It's really the only publication in America that presents the Government's problems of an information sort. It's a scoop. Not even the Office of War Information makes this data available to advertisers who of their own free will and volition have already spent upwards of $150,000,000 in support of the home front wartime education program.

Your reporter has thumbed through, then studied the volume—and marveled. It consists of 64 pages, 8½ in. by 11 in., printed in two colors. The Research Committee responsible for the collection of data, it's editing and its physical presentation has contributed more than just a book to the Graphic Arts for its presentation to the Country's advertising and publicity men. It has contributed to the cause of democracy—evidencing the desire of an industry to accept the wishes and decrees of the Government, much as they affect the economy of the industry, and marshall all the remaining men and materials for a total-war push toward Victory.

That's high-sounding lingo, Mr. Superintendent, but it is substantially the interpretation of the Committee members' aims. Chief among which is keeping your precious war tools—your presses on the right track, printing for Victory.

The *Guide* shows how, without even intimating—and this is as important as the *Guide* itself—that printers and lithographers are selling *printing as printing* in the face of some severe curtailments of materials and the well known scarcity of craftsmen. Very openly and forthrightly it is stated in the introduction to the *Guide* that the Committee's interests are *only* in printing that will contribute *directly* to the war program, and *only* with the men and materials the Government deems necessary.

For your guidance, Mr. Superintendent, I think it best to show one or two "for instances"—just to indicate how the *Guide* works for printing and lithographic salesmen and their advertiser-customers.

If one of your salesmen contacts an advertiser whose products might well be tagged to the Department of Agriculture's Victory Gardens program, the *Guide* section "Nutrition" gives all the information that starts the advertiser in the proper direction.

(The Index to the *Guide* is crossed, conveniently, to list more than 500 topics of interest to advertising man, copy writer, house organ editor, designer, artist, salesman.) Under "Victory Gardens", the interested advertiser finds illustrated the official symbol of the project, the kind of photographs the Department of Agriculture makes available for advertising and publicity purposes, the Government official charged with the promotion of the work, together with a list of all the publications offered, free, by the Department of Agriculture, the Office of War Information and a number of private sources who, early, joined hands with the Government in developing the Victory Gardens project.

Also as a case in point: If one of your salesmen is charged with the assignment of editing an employee-manual for one of the big industrial plants in your area there is a definite assist awaiting him in the manpower pages of the *Guide*. Such a topic is essentially a manpower and morale project, and consistent with the program of the War Manpower Commission. The *Guide* offers complete information on the source of materials for inclusion in such a manual; lists pamphlets and booklets available, free, at the War Manpower Commission, the Office of War Information, and private agencies. Offers successful case histories of similar projects.

Your reporter, however, keeps insisting that this bright, well illustrated *Guide to Essential Wartime Printing and Lithography* must be seen, studied and referred to often, to be best appreciated. It's fact-packed from cover to cover. Four charts at the outset list the 15 major divisions of education under the heading "How to Essentialize Your Printing and Lithography", and indicate how more than 200 businesses and services can tie-in their advertising activities to each of the individual projects. The editors state the Graphic Arts Victory Committee's aims in a well worded introduction and

(*Continued on Page 32*)

Just take a look at a Burgess Chrome Mat under a glass. You'll have a mighty hard time to find even the slightest imperfection.

246

A Laboratory Product

BURGESS Chrome MATS

BURGESS CELLULOSE COMPANY

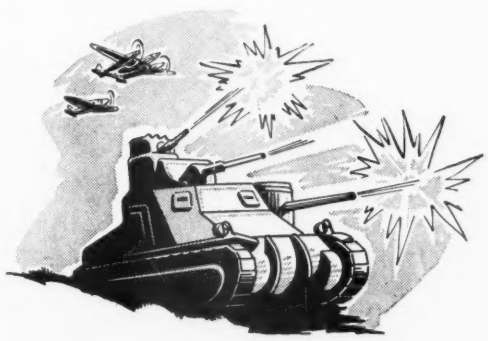
Manufacturers and Distributors of Burgess Chrome and Tone-Tex Mats

FREEPORT ILLINOIS

Pacific Coast Representative
RALPH LEBER CO.,
426 Polson Bldg.,
SEATTLE, WASH.

YOUR COMPOSING ROOM AND THE WAR

The war means shortages on the Home Front . . . both of materials and manpower. Until the war is over, your composing room will suffer more and more from lack of sufficient and well qualified labor. It is important, therefore, that it be arranged and equipped in the most efficient manner. Hamilton equipment offers the solution by making possible good arrangement and providing compositors with opportunities to work productively **ALL THE TIME**.



Hamilton's large steel plant is devoted almost entirely to war production . . . a job we are proud to do. We are still able to supply you with all regular wood items, however, and also have quite a good stock of steel items available which can be supplied in accordance with the W.P.B. limitation order.

See your Hamilton dealer for full information about the Hamilton items available and how they will help you meet the war-time problems.

Hamilton *MANUFACTURING COMPANY* • *TWO RIVERS, WISCONSIN*

the Graphic Arts can be proud in going on record before the Country with such a selfless program in the war tempo.

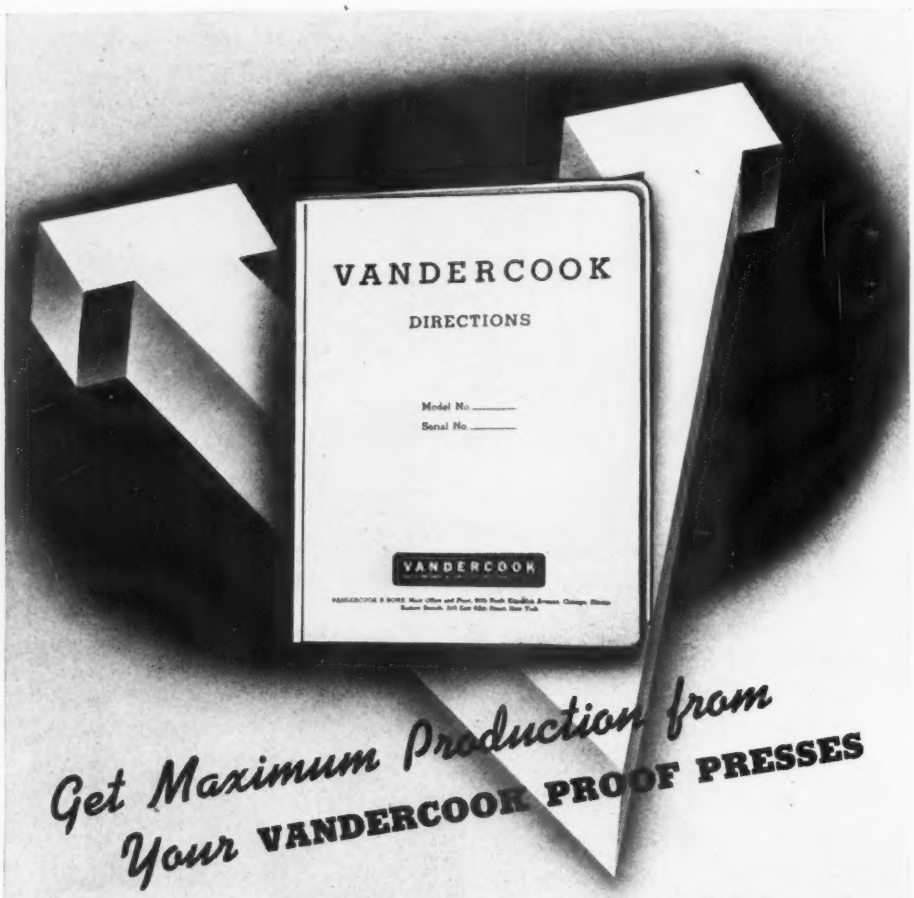
There, fellows, is the 54 pages of seemingly endless data. How the editors crammed so much information in so readable and comprehensive a fashion is more than this reporter can imagine.

The *Guide*, in its text, and as it is issued, now, is planned for the use of the advertising man; your salesmen's clients. Individual salesmen, and you, too, Mr. Superintendent, may send for the *Guide*, even tho', your Company may not be a participating member in the Committee's work. You're welcome to a copy. This book was edited and published for the good of all, the editors want it known, and they see no reason why all advertising media shouldn't profit by the contribution of the Graphic Arts through the Graphic Arts Victory Committee.

Your reporter, still insisting, believes the Graphic Arts is rendering a patroitic service in the publishing of this manual out of contributed industry dollars, ranging from $1 subscriptions by small, country print shops to the largest manufacturers of equipment. The whole great and vast Graphic Arts industry can be thankful for the men, their efforts and talents, that have made the *Guide* possible.

Send for your copy *today*.

Harry L. Gage, Linotype vice president, addresses the members of the Connecticut Valley Club of Printing House Craftsmen at a meeting on March 20 at Springfield, Mass., on *The Craftsman's Responsibilities in Wartime*.



Get Maximum Production from Your **VANDERCOOK PROOF PRESSES**

Directions on the most efficient way to operate and maintain your Vandercook Proof Presses will be sent to you without any obligation.

As the instructions are prepared for individual types of presses, it is necessary that you send the Model and the Serial Numbers for EACH proof press.

If you have any proving problems or need additional equipment or parts, write fully. Every effort will be made to help you.

VANDERCOOK

PROOF PRESSES - BLOCK LEVELLERS - HACKER GAUGES

VANDERCOOK & SONS, Main Office and Plant, 900 N. Kilpatrick Ave., Chicago, Ill.
Eastern Branch: 216 East 45th St., New York - Canada: Sears Limited, Toronto

EXECUTIVE ¶s

Charles V. Morris has been appointed a member of the sales and promotion department of William E. Rudge's Sons, New York printing house, it was announced recently by President Frederick G. Rudge. Mr. Morris was formerly secretary and sales manager of J. E. Linde Paper Co., the same city. Mr. Morris is well known for his creative ideas in essential printing. He is a charter member of the Graphic Arts Victory Committee which is now in process of formation throughout the country. Mr. Rudge stated that much of Mr. Morris's time will be taken up with the Government's wartime promotion program in the interests of William E. Rudge's Sons and of the firm of Zeese-Wilkinson & Co.

Mechanical Superintendent LeRoy Church of the Akron (O.) *Beacon-Journal*, spoke before 200 members of the Pathagoras Club at Masonic Temple in Akron on February 23, *on The History of Printing*.

The Goss Printing Press Company has appointed C. S. Reilly as Sales Manager, effective February 1. Mr. Reilly has had ten years of Goss service, starting in the engineering department, and for the past four years has been sales representative in the midwest and southern states. While with Goss, he travelled through several countries in South America and has had considerable experience in sales, administration and engineering activities. Prior to coming with Goss, Mr. Reilly graduated from Iowa State University and worked in the electrical engineering field of printing press controls.

C. S. Reilly A. J. Krohn

The Goss Printing Press Company recently announced the appointment of A. J. Krohn as Assistant to President Corlett. Mr. Krohn became associated with the Engineering Department of Goss in 1926 after attending Armour Institute of Technology. For the last thirteen years, Mr. Krohn worked closely with Mr. Corlett before he became president of the company.

(*Continued on Page 34*)

If you are not using it

SEND FOR SAMPLE

"FLECTO" Gummed Backing Felt

Porosity permits quick escape of steam—glue coat prevents slipping or leaving matrix under heat. Adhesive does not crack, peel, or crystallize. Gauges .021, .025, .030, and .035 in sheets 18"x 24" also gauges .040, .045, .050, and .060 in sheets 18"x 22"—no charge for strip cutting.

"TRUE-MOLD" CORK MOLDING BLANKETS

Sets match in weight and density, give better molding. Uniform density throughout gives "TRUE-MOLDING" over entire form surface. We furnish hard and extra-hard (special) blankets.

EASTERN NEWSPAPER SUPPLY

9603 Northern Boulevard Corona, New York

FOR SALE

3 REID-HILL Newspaper Page Storage RACKS

Store 20 full 8 col. pages with stereotype chases

WILLIAM REID & CO.

2271 Clybourn Ave., Chicago, Ill.

Mustn't run out of CERTIFIEDS in these uncertain days

"What, another mat requisition?" asks the watchful business manager. "I put through an order just the other day!"

"Just the other week, you mean."

"Well, anyway, you can't be running short as soon as this."

"No and I don't mean to run short if I can help it. You know what shipping conditions are today and what might happen to a 'rush' order. So, I am trying to build up a 30 day reserve — 30 days between us and real trouble, if shipments get worse."

"O K. We mustn't run short on Certifieds!"

The Certified organization will do all it can to get mats where and when wanted in the shortest possible time. But, both as a measure of caution and a patriotic service it urges that buying of mats be put on a 30 day reserve basis.

CERTIFIED DRY MAT CORPORATION

9 Rockefeller Plaza, Dept. M New York, N. Y.

Certified DRY MATS

C&G Saw Trimmers *stand the test*

IN AN EMERGENCY

C&G SAW TRIMMERS are designed to stand up under heavy duty with minimum attention. Maintained accuracy has been built into them.

Under war-time conditions they are proving their superior worth in hundreds of plants throughout the country. If you are not using C&G Saw Trimmers, get the facts on their exclusive features that contribute to safe, accurate, and easy operation. Write today.

No. 3-A C&G Saw Trimmer

MILWAUKEE SAW TRIMMER CORP.
610 EAST CLYBOURN STREET, MILWAUKEE, WISCONSIN

Charles C. Rhame, manager of the New York agency of the Linotype Company, has learned of the recent promotion of his son, Dr. Harold E. Rhame, from lieutenant commander to commander in the United States Navy. Dr. Rhame, who formerly was the Linotype Company's medical adviser, as well as a general practitioner, was called into active service in the naval medical reserve corps in May 1941, with the rating of surgeon and rank of lieutenant commander.

Paul J. Thoma, vice president of the E. J. Kelly Company, has been appointed a member of the Technical Printing Ink Sub-Committee of the Protective and Technical Coatings Industry Advisory Committee. Members of this committee serve as an advisory body regarding technical problems of the printing ink industry. Mr. Thoma graduated from the University of Illinois in 1927 with a B. S. degree in Electrical Engineering. He joined the E. J. Kelly organization in 1932 and was made vice president in 1934. He is president of the E. J. Kelly Company of Maryland, Baltimore.

Kelly's Thoma is member of Technical Printing Ink Sub-Committee.

Joe Goggin, who has been associated previously with two other stereotype mat manufacturers, recently became affiliated with The Morley Company of Portsmouth, N. H. He will represent the company in the middle-western states with headquarters at his home address, 1639 North Lorel Ave., Chicago. Mr. Goggin is an active member of Chicago Stereotypers' Union, Local No. 4, IS&EU. He is also a member of the International Association of Printing House Craftsmen. He enlisted in the U. S. Navy Medical Corps in April 1917 and was assigned to expeditionary duty with the U. S. Marines in France in World War No. 1. He possesses a wide practical knowledge of stereotyping and his training and experience include the principal types of equipment used in all branches of the stereotyping processes. He is the author of *Manual of Stereotyping* which is used in a large number of countries.

Joe Goggin, well known stereotype technician, is now a representative of The Morley Company in a sales capacity.

At the January meeting of the Wisconsin Printing Ink Association in Milwaukee, the following officers were elected and installed: President, James R. Greene; First Vice President, Fred C. Sander; Second Vice President, Oscar A. Dhein; Secretary, H. F. Massopust; Treasurer, Earl T. Nigman; Sergeant-at-Arms, Charles Sanguin, President Greene appointed committees at this meeting who will assist the officers with their duties.

W. W. Waymack, for years associated with Editor Harvey Ingham of the Des Moines *Register and Tribune*, was elected vice president and editor of those papers in January at the annual stockholders' meeting. Mr. Waymack succeeds Mr. Ingham, who is now editor-emeritus. Mechanical executives will recall that Production Manager Joseph F. Pezdirtz was elected a vice president of the *Register* and *Tribune* some time ago.

The United States 8th Air Force headquarters announced the award of an air medal to the late First Lieutenant James L. Lee, son of Mr. and Mrs. J. Wesley Lee, Grand Haven, Mich., who was killed in action in the European theatre of war on January 3, according to an AP dispatch from London. The medal was awarded for meritorious achievement in aerial combat. He was 26 years of age. He was a graduate of Carnegie Institute of Technology, Pittsburgh. His father, J. Wesley Lee, is vice president of The Challenge Machinery Co., Grand Haven, Mich. Surviving are his widow, Mrs. Helen Blom Lee of Muskegon, Mich.; his parents, two sisters, his grandparents, Mr. and Mrs. J. Edgar Lee and also Mrs. Anna Sawnty, all of Grand Haven.

Lieut. J. L. Lee, reported killed in action, was awarded a medal for meritorious achievement in aerial combat.

George W. Little passed away at his home in Philadelphia on February 17. In point of service, he was the oldest employee of the Lanston Monotype Machine Co. He had completed 52 years of service with Monotype. He would have been 72 years of age in April. He was a machinist by trade and was the first man employed by Inventor Tolbert Lanston when he began building the first model

TODAY

when standards are so uncertain, 163 years of continuous experience should reassure you

HUBER INKS

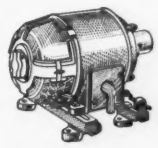
For newspaper, letterpress and offset printing

Huber Products in Use Since 1780

KIMBLE

CUSTOM-BUILT MOTORS

THE
PRODUCT OF NEARLY FORTY
YEARS OF SPECIALIZATION



KIMBLE
ELECTRIC COMPANY

2005 WEST HASTINGS STREET
CHICAGO, ILLINOIS

DISTRIBUTED BY: AMERICAN
TYPE FOUNDERS

of the Monotype typesetting machine. Mr. Little also assisted in building other experimental and operating models at the Washington factory before manufacturing operations were transferred to Philadelphia in 1899. For several years prior to his death, Mr. Little was employed as an inspector in the Monotype mold making department, in which work he was regarded as particularly expert by his employers.

The Sunday, February 21 edition of the Zanesville (O.) *News* carried a feature story about Edward A. McCaddon, composing machinist. McCaddon retired five years ago at the age of 65. He had educated three children, had purchased some real estate, had laid aside some of his earnings for the future, and expected to take things easy for the rest of his life.

However, at the insistence of Composing Room Superintendent E. C. Schaeffer in the early part of February, McCaddon came to work for the *News* to help fill the ranks of trained mechanics who have been called to war. In speaking of Mac's return to work, Superintendent Schaeffer said: "I am glad Mac accepted this position when I offered it to him. I regard him as one of the most competent linotype machinists I have ever known."

To demonstrate that Mac has not lost his intimate knowledge of the fundamentals upon which the various sections of a composing machine have been built, it might be well to quote his remarks after he had been at work for a couple of weeks. Said he: "It was a little strange at

first. These new-fangled machines have a few more gadgets on them than they used to have, but the secret of successful operation is still the same—Keep 'em clean."

With rationed income from his idle property which used to house a filling station, as well as other retrenchments brought about by the war emergency, Mac is happy to have the kind of skill which defies the age limits usually forced upon older workers. "I'm lucky to have my health and pep," said he, contentedly, surveying the battery of machines now under his attentive care.

In discussing the calling back into service of Mr. McCaddon, Superintendent Shaeffer said: "It seems to me that a large part of the manpower shortage in the printing industry can be solved if composing room executives recalled some of the retired printers. McCaddon is the third "old timer" I have recalled and they are 'tickled pink' to get back into harness. their work is highly satisfactory."

L. D. McShane, former vice president of Sam'l Bingham's Son Mfg. Co. and manager since March 1941, of the Indianapolis subsidiary of that company, died at the Methodist Hospital in Indianapolis on Thursday, February 4, 1943, after an operation for cancer. He was 58 years of age. In September 1931, he was transferred from the Des Moines factory to the Chicago office of the company, and in February 1932, he was elected a vice president, in charge of sales and production. He remained in that position until March 1941. Because of ill health, he asked to be relieved of some of his duties and was transferred to the Indianapolis branch as manager where he remained until his death. He is survived by Mrs. McShane and three children: Leo D. McShane, jr., who is now in the army; John B. McShane who is still in school, and a daughter, Jo-Ann.

Laminated Shim Company, Inc., Glenbrook, Conn., announces the retirement of Earl L. Young, vice president in charge of production. Mr. Young has been with the company 22 years, since February 1, 1920, and has been in charge of production to the date of his retirement.

Salvaging and Maintaining Equipment by Metallizing

In a recent contest sponsored by Metallizing Engineering Co., Inc., $650 in war bonds were awarded in a nation-wide contest designed to reveal outstanding methods for salvaging and maintaining machinery under wartime conditions. This was the second contest open to users of metal spraying equipment.

First prize, a $250 war bond, went to John Frisch, M.E., of Price Bros. & Co., Ltd., Riverbend, P. Q., Canada. He described how irreplaceable 2000 lb. bearing journals used on heavy paper machine rolls are salvaged with 28 lbs. of sprayed steel each.

TESTED STANDARDS

(Continued from Page 15)

at the time so many of our men were entering the armed services or were going into defense jobs. It became necessary to diversify the capacities of our pressroom employees as much as possible. The result has been better trained men and consequently better lithographers. In pursuing this plan of training men to do more than one kind of work we also took into consideration the fact that superintendents and foremen should not be considered super-men, lithographically speaking. By having been away from actual contact with the operation of a press they have become more or less out of practice and should be brought in on this educational program in order that they may be able to do their part should the occasion arise.

Executives Should Not "Get Away" from Press Operation

I would like to say to foremen and superintendents that you should never get so far away from your press operations that you could not go in there in a practical way and operate that press equally as well as any man under your supervision.

Employee Cooperation

It behooves all of us to bring our employees a little closer to the facts concerning standards, substitution and conservation of all materials. They should be encouraged to use more care in handling their press, to check their oiling and above all to be just a little cleaner around their own machine. I also think the educational effort will make a better spirit between labor and management, thereby helping to cut the cost of operation so that you will be enabled to meet some of those so-called low-priced jobs. The reason for some of these low-priced jobs, especially the ones upon which you cannot understand how the other fellow can cut his price so low, is, as I see it, right in your own shop. I believe some of the suggestions I have offered might enable you to compete with the so-called competitor whose prices are low. If you check him a little more you might find that he is still making a profit.

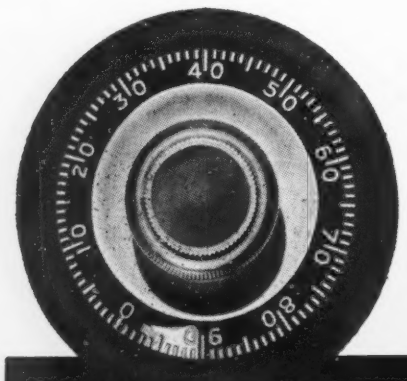
Check your standards, improve them wherever possible, teach your people a little more about the job they are doing and become better acquainted with your own employees, because the co-operative spirit is needed more now than ever.

SOME POTENT THINGS

(Continued from Page 16)

send to the manufacturer the equivalent weight in old matrices or have a credit established as a result of having disposed of old matrices through regular junk channels. The latter method of course is much more simple. I suggest you make a note to check into this upon your return home and make sure the mats have been disposed of and that proper receipts have been secured and mailed to your supplier.

If a broken part causes an emergency in your plant and quick action is neces-



THE RIGHT COMBINATION

Cushion Cork
PAT. 2,207,999 IN COMB. WITH TINGUCORK

&

TINGUCORK
PAT. 2,207,999 IN COMB. WITH CUSHION CORK

Patent No. 2,207,999 Combination now makes it possible for pressroom operators to secure Superior Cork Packing in a wide range of gauges with the combined advantages of Tingucork's density and Cushion Cork's resiliency to compensate for plate irregularities and mechanical conditions.

"CUSHION CORK"— Called the safety blanket because its high resiliency allows it to accept extreme compressive stresses, such as web breaks, and still immediately recover its original size or gauge.

"TINGUCORK" — Of greater density than Cushion Cork; *must always* be used as a companion blanket with Cushion Cork where a Drawsheet provides the printing surface.

TINGUE BROWN AND COMPANY
114-120 EAST 23rd STREET, NEW YORK, N. Y.
1227 WABASH AVENUE, CHICAGO, ILLINOIS
723 E. WASHINGTON BLVD., LOS ANGELES, CAL.
CANADIAN SALES AGENTS:
ROSS WHITEHEAD & CO., LTD.
MONTREAL, CANADA

EASTERN THIN ZINC UNDERLAY BOARD

In .015 and .032 gauge

for backing 18-gauge and 21-gauge photo-engraving zinc to standardize all cuts to the regular 16-gauge thickness.

This method eliminates change of base heights in the composing room and stereotype department, shallow matrix impression, and the necessity for backing off ink rollers and impression cylinders in the pressroom where 18-gauge line cut layouts are used in the form.

Write for samples and prices

EASTERN NEWSPAPER SUPPLY

9603 Northern Blvd. Corona, L. I., N. Y.

"They may be Okay for tonal quality but we're always sure of it with WOOD MATS."

WOOD DRY MATS

WOOD FLONG CORPORATION
HOOSICK FALLS, NEW YORK
New York City Office: 551 Fifth Avenue

sary in order to get the particular machine affected in operation, telegraph the Newspaper Section of the Printing and Publishing Division of the War Production Board, 2nd Wing, 2nd Floor, Temporary S, Washington, D. C. Give the name and number of the part, the cost, name of supplier, and the rating necessary to secure it. If that practice is followed much valuable time may be saved in getting delivery on the emergency part needed.

Many of the larger and medium sized newspapers have rearranged their papers so as to conserve space. Reduction of the number of hangers in heads have been made. A number have reduced the size of art layouts and cartoons. Many have reduced daily comics from five and six columns to four columns. The Cleveland *Plain Dealer* is one of the newspapers now using four column comics. William Vorpe, the Sunday editor of that paper told me recently that the *Plain Dealer* had not received a single complaint as a result of the reduction. So it seems that is one thing that certainly can be done. There have been so many good suggestions in the different trade publications along this line it seems you should have them all before you. The problem now is to get at it and get some of them done.

I want to suggest that every publisher spend a little more time than you have in the past with your mechanical men. The materials situation is going to be the most difficult of any problem in connection with operation of newspaper plants. Within the past few weeks it has come to our attention more frequently. In the future it will bob up still more often. How well conservation is done in your plant will in a large measure depend upon how well the need for conservation is sold to every man and woman in the situation. It is not only your patriotic responsibility, but it is also good management, to see to it that conservation meetings are held and the idea is sold. We know the materials we are using in our newspapers are extremely important to our men in the armed forces. They need them with which to fight.

INTENSIFY SCRAP DRIVE

(Continued from Page 24)

that similar material will be returned to Philadelphia or will be scrapped locally within 30 days of receipt of the new parts.

With respect to freight charges on returned material, it is stated in the letter that "Customers can in most cases turn their old machine parts over to a local dealer as it would save them transportation charges to Philadelphia. . . . If a customer will return to us any unusable matrices we will keep a record of their weight and use this material as the basis of new shipments to them until such shipment of matrices has been used up."

BOOKS

(Continued from Page 20)

summarization of the level of illumination which is regarded as the most important nontypographical factor. The subject of illumination in relation to reading performance is incorporated in the text wherever appropriate. The best printed material in the world, of course, would be of little avail, if proper lighting conditions were not present. On the other hand, the finest light, either natural or artificial, cannot compensate for poorly reproduced reading matter in terms of eye-strain and eye-fatigue.

From the mechanical standpoint, the book is produced in entire harmony with the practices recommended in the subject matter. The combination of nonglare paper and ink, size and style of type, line-length and line-reading make the reading easy.

Reading As a Visual Task—By Matthew Luckeish, D.Sc., D.E., and Frank Moss, E.E. 428 pages, size 5½ in. by 8⅝ in. Bound in maroon cloth, gold stamping on backbone. Price $5.00 per copy. Published by D. Van Nostrand Co., Inc., 250 Fourth Ave., New York, N. Y.

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Acquires Interest in Sleight

R. Edward Sleight, Louis W. Hraback and Courtland Palmer announce that the Sleight Metallic Ink Companies of Pennsylvania and Illinois are now associated with National Fireworks, Inc., of West Hanover, Mass., which has bought an interest in their business. There will be no change in the personnel of the ink companies. R. E. Sleight will remain as president of the Pennsylvania Company, and has been elected chairman of the board of the Illinois Company. L. W. Hraback has been elected president of the Illinois Company.

PATENTS

(Continued from Page 25)

2,310,995. RESILIENT SUCKER FOOT made of rubber or such material and designed to be effective in picking up and feeding heavy sheets of paper and cardboard in connection with a printing mechanism. It replaces the known, smaller rubber foot customarily mounted in a metal body. The new sucker foot is said to have the advantage of negligible wear whereas former rubber feet had to be replaced frequently. The desirable characteristic of long life is attributed to the elongated shape of the foot. It acts as an extension of the sucker arm so that it offers considerable yieldability against the shock of the stock which normally hits the foot with considerable force due to the vacuum applied. Invented by Willis A. Robinson, Sr., Chattanooga, Tenn. Assigned to Miller Printing Machinery Co., Pittsburgh, Pa. Application January 13, 1941. 7 claims.

Miscellaneous:

2,309,580. NON-OFFSETTING PRINTING INK in which a rosin, either gum or wood, is employed as one of the main ingredients, thus reducing the cost materially. The ink includes a varnish consisting of 50% of a liquid polyglycol as a solvent for the binder. The binder consists of 25% by weight of the varnish of rosin selected from wood rosin and gum rosin and 25% of the varnish of a resin such as a rosin modified by maleic or fumeric acid. The ink will stay open on a press even under high humidity although offset can be prevented by treating it with water in the form of steam or a fine spray. Invented by Donald R. Erickson and Paul J. Thoma, Kalamazoo, Mich. Assigned to Michigan Research Labs., Inc., Kalamazoo, Mich. Application June 2, 1941. 2 claims.

2,309,946. TEXTILE PRINTING COMPOSITION employing a new type of azo dyestuff which overcomes the stability difficulties of prior emulsion printing pastes while producing prints of comparable quality. The new azo dyestuffs consist essentially of water-insoluble triazenes of diazoamino and diazoimino compounds which can be reconverted into diazo compounds by aqueous acid uniformly dispersed through a hydrophobic liquid capable of forming stable water-in-organic liquid emulsions. In one form of the invention, the emulsion is treated before printing with an aqueous acid solution added directly or in the form of another emulsion. This solution converts the triazene to a water-soluble diazo salt which transfers from the organic to the aqueous phase. The resultant printing paste is a standard dyestuff solution-in-organic liquid emulsion paste and may be printed on grounds prepared by impregnation with the coupling component. Invented by Albert E. Gessler, New York, and Roy A. Pizzarello, Mt. Vernon, N. Y. Assigned to Interchemical Corp., New York, N. Y. Application May 27, 1940. 8 claims.

2,309,982. TEXTILE PRINTING COMPOSITION having unusually low cost and excellent printing properties. It comprises an emulsion of water in a hydrophobe organic liquid, the emulsion containing an azotizable amine, a chemical capable of producing nitrous acid in the presence of acid and an azo coupling component, diazotization and coupling taking place in the acid ager. Example: 1.22 parts dianisidine are dissolved in 18.4 parts white pine oil. To this are added 20 parts of a 5% solution of ethyl cellulose in a 2 to 1 mixture of Solvesso No. 2 and toluene. 2.6 parts of the anilide of beta hydroxy naphthoic acid are dissolved in 56 parts of water, 2 parts of sodium hydroxide and 2 parts sodium nitrate. This solution is slowly run with rapid agitation into an organic phase. A smooth water-in-oil emulsion results. Printing and acid-ageing gives a sharp blue print. Invented by William B. Reynolds, Elmhurst, Long Island, and Sylvester A. Scully, Yonkers, N. Y. Assigned to Interchemical Corp., New York, N. Y. Application May 27, 1940. 6 claims.

2,310,012. PRODUCTION OF STABLE TEXTILE EMULSIONS, based on the discovery that stable emulsions of water-soluble dye components can be prepared by reacting a water-insoluble reactant, dispersed in an organic liquid capable of producing a stable water-in-lacquer emulsion, with an aqueous reactant. The material used as a non-aqueous reactant may be one of a number of compounds, such as the mixtures sold under the names "Rapidogen," "Diagen," etc. These mixtures are stable in dry form but lose color strength on storage in aqueous solution. By dispersing such a mixture in a non-aqueous system and then emulsifying in an aqueous alkali solution, rapid reaction can be obtained with the formation of a satisfactory printing emulsion. Invented by Norman S. Cassel, Ridgewood, N. J. Assigned to Interchemical Corp., New York, N. Y. Application May 27, 1940. 4 claims.

2,310,013. ECONOMICAL METHOD OF PREPARING A PRINTING PASTE for textile fabrics which comprises preparing a mixture of a diazotizable base such as yields diazo compounds known as fast color salts, e.g. Dianisidine (Blue B Base) and a lacquer capable of emulsifying water therein. An aqueous acid solution is then emulsified into the lacquer to produce an emulsion with the base in solution in the water. Thereafter an aqueous solution of a diazotizing agent such as a nitrite is emulsified into the solution to cause diazotization of the base. Invented by Norman S. Cassel, Ridgewood, N. J. Assigned to Interchemical Corp., New York, N. Y. Application July 22, 1939. 6 claims.

2,310,087. PREPARATION OF DIRECT PRINTING GRAY-TO-BLACK DYES of the dibenzanthrone series which comprises reducing a nitro dibenzanthrone compound such as a nitro-dibenzanthrone, a nitro-dibenzanthronyl or a nitro-isodibenzanthrone in alcoholic suspension with sodium sulfide, adding a caustic alkali such as caustic potash to the resulting mass and heating to effect condensation of the resulting amino-dibenzanthrone to produce the dyes. The products so obtained may be pasted and made by known methods into a printing gum which produces gray-black prints of excellent fastness to washing, light and water spotting. Invented by Edward T. Howell, Wilmington, Del. Assigned to E. I. du Pont de Nemours & Co., Wilmington, Del. Application August 9, 1940. 8 claims.

2,310,109. PROCESS FOR PRODUCING CAPILLARY ACTIVE COMPOUNDS which comprises forming acid amine salts by reacting tertiary amines containing at least one alkyl radical of at least six carbon atoms, e.g. hexyl-N-piperidine with certain aliphatic carboxylic acids such as fumaric acid, maleic acid, etc. and then heating the acid amine salts to a temperature of 120-160° C. until molecular rearrangement occurs and compounds of the betaine type are formed. Products of the invention are useful as detergents, as equalizing media for vatting-dye stuffs, as expedients in textile printing, etc. Invented by Richard Neu, Dessau, Anhalt, Germany. Assigned by mesne assignments to "Unichem" Chemikalien Handels A.G., Zurich, Switzerland. Application January 15, 1938. 17 claims.

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2,310,419. METHOD OF FORMING VARNISHES, based on the discovery that when varnish oils are cooked in the presence of a small quantity of castor oil, the varnish oils become bodied in ½ to ¼ of the time usually required for producing heavier bodies. The film-forming properties of the resulting varnishes are also improved and the acid and iodine values are directly controllable in relation to the amounts of castor oil employed. Example: 136 parts white heavy bodied raw, 11.3 parts Bakers No. 16 castor oil and 533 parts printing ink linseed are mixed together. 15% of this control oil is added to 85% of the varnish oil to be kettle cooked. The resulting varnishes are especially useful in printing ink formulations due to freedom from livering. Invented by Wells W. Ginn, Cincinnati, Ohio. Assigned by mesne assignments to Chemical Novelties Corp., Cincinnati, Ohio. Application October 17, 1941. 6 claims.

2,310,436. PRINTING UPON A TEXTILE FABRIC of relatively dark color with a design of a light color so that the design is resistant to fading and discoloration, highly opaque and does not require bleaching or washing operations to obtain satisfactory shades in the lighter portions of the designs. To accomplish this, an ink is formed of a solution of a thermosetting resin, e.g. a urea-formaldehyde resin, containing a sufficient amount of pigments to obtain permanent masking and coloring effects in the designs, and the ink is then printed as a discontinuous film on the fabric. Example: A paste is formed of the following ingredients: Plasticizing resin—12%; urea-formaldehyde resin—12%; pigment, e.g. titanium dioxide—55%; xylol—13%; butyl alcohol—8%. This paste is applied by engraved rollers or the like and after application, the fabric is passed through an oven or over heated rollers to harden the urea-formaldehyde resin and provide permanent coatings in suitable designs on the fabric. Invented by Melvin W. Johnson, Nutley, N. J. Assigned to Pittsburgh Plate Glass Co., Allegheny County, Pa. Application December 23, 1939. 2 claims.

2,310,795. METHOD OF PREPARING AN EMULSIFIED COMPOSITION having improved softening, filling, spreading or lubricating properties and adapted to be used in sizing, printing and finishing textiles, e.g. rayon, artificial silk threads, etc. Example: casein—7.62%; triethanolamine—5.11%; urea—6.22%; "Sunoco Spirits"—66.26%; stearic acid 3.04%; phenoxyethylsulphonate—0.27%; water—11.48%. In addition to its use as a size, this particular emulsion is especially suitable for printing in conjunction with the developing-type colors and for lubricating the printing paste. Invented by Fred G. La Piana, Forest Hills, N. Y., and Herman S. Bosland, Paterson, N. J. Assigned to Stein, Hall & Co., Inc., New York, N. Y. Application August 31, 1939. 7 claims.

2,310,961. METHOD OF PREPARING POLYMERIC MATERIALS from isopropenyl toluene by polymerizing a mixture of this compound with acrylonitrile by heating the mixture in a solution with a solvent such as ethylene dichloride or in emulsions or dispersions with or without plasticizers. Emulsions and solutions of these polymeric materials may be employed in textile printing processes as well as in the sizing and finishing of textiles. Invented by Edward L. Kropa, Old Greenwich, Conn. Assigned to American Cyanamid Co., New York, N. Y. Application May 3, 1941. 10 claims.

2,310,969. IMPROVED PROCESS FOR THE PRODUCTION OF SHAPED STRUCTURES consisting of or containing cellulose derivatives comprising the production of a solution of cellulose ether xanthate containing not over 4% caustic soda and precipitating the cellulose derivative by coagulating the solution by means of a bath containing an alkali carbonate as the coagulating agent. The solutions of cellulose ether xanthates can be worked up to give shaped structures such as finishing agents for fabrics, textile printing, bookbinders' linen, and tracing cloth. Invented by Leon Lilienfeld, Vienna, Germany. Assigned by Antonie Lilienfeld, administratrix, to Lilienfeld Patents, Inc., Boston, Mass. Application May 13, 1940. 6 claims.

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Plate Making:

2,309,161. CLAMP FOR FASTENING A PLATE to the drum of a press with a uniform clamping pressure distributed at spaced points along the ends of the plate by a construction that will not yield to let the plate move out of register during operation of the press. The clamp is so constructed that it does not injure the plate and the plate need not be perforated to be held firmly in place. Thereby adjustment for alignment and side registry can be made rapidly without refolding or repunching the plate as is the case with many conventional clamps. Invented by Frank J. Breman, Oak Park, and Edward F. Dell, Park Ridge, Ill. Assigned to Davidson Mfg. Corp., Chicago, Ill. Application May 25, 1939. 14 claims.

2,309,440. METHOD OF REPRODUCING STENCILS in some quantity for textile printing purposes as well as for multiplicators or other office machines. The master stencil is a photomechanically perforated sheet or layer of gelatine or metal or other caustic resisting material. The method of producing derivative stencils of cellulose consists in bringing a sheet of cellulose into close contact with the master stencil which is insoluble in a predetermined solvent. Vapors of the solvent are applied to the master stencil, through the perforations therein, to the sheet of cellulose so that the sheet of cellulose is etched corresponding to the perforations of the master stencil. Invented by Ernst Buri, Donaueschingen, Germany. Assigned to Hans Fretz, Zurich, Switzerland. Application February 17, 1940. 4 claims.

2,310,547. PRINTING PLATE HOLDER of the type disclosed in patent No. 1,955,933. A plate with chamfered edges is laid on a bed which has a series of parallel dovetailed slots into which holding plates with screws are fitted. The holding plate or clip has an edge which is undercut to fit the edge of the printing plate, and a circular stem or boss extends downward into the slot through which the screw is inserted. The screw is engaged at the bottom end by a block in the dove-tailed slot. The stem of the clip fits closely into the mouth of the slot and prevents movement of the holder and printing plate even if the screw becomes slightly loosened. Invented by Siegmund J. Roesner, Oak Park, Ill. Unassigned. Application June 6, 1940. 1 claim.

2,311,047. LITHOGRAPHIC PLATE comprising a thin flexible aluminum sheet having its lithographic surface grained and abraded by wire-brushing with a mixture of lime, finely divided silica, and water to provide a grease-receptive coating. The coating is receptive to a grease film applied by crayon, lead pencil, grease ink, or by a stylus through a tracing sheet such as carbon paper or a typewriter ribbon. Or a photolithographic process can be used. The portion of the plate untouched by these grease markings is then made water receptive and grease repellent by applying a new etch comprising an aqueous solution of glycerine, mono-ammonium phosphate, ammonium sulfate, and phosphoric acid. A fine-grained plate capable of transferring extremely accurate images is said to result. Invented by William T. Hagelin, Chicago, Ill. Unassigned. Application December 6, 1940. 15 claims.

2,311,071. HALFTONE SCREEN to be used in direct contact with the light sensitive surface in photo-mechanical reproduction. One side of the transparent support is roughened so as to prevent optical interference patterns when the screen is in contact with a smooth surface. Uniform definition is said to result even when dust particles get between the screen and the surface. An important feature of the invention is that the elements on the transparent support are non-light diffusing. The elements preferably consist of a transparent colored dye instead of the usual silver or pigmented gelatin which have a matte or light diffusing effect. Results are said to be superior not only to previous contact screens which were light diffusing, but also to non-contact (regular) halftone screens whether diffusing or non-diffusing. Invented by Alexander Murray, Rochester, N. Y. Assigned to Eastman Kodak Co., Rochester, N. Y. Application January 12, 1942. 8 claims.

2,311,489. PAPER PLANOGRAPHIC PRINTING PLATE BASE which may, for example, comprise a tough kraft paper containing a binder of a water-receptive character and which helps prevent the fibers of the paper from being pulled apart. Rosin may be employed with polyvinyl alcohol; or gelatin or other colloids may be used in place of the polyvinyl alcohol. To paper thus made water-receptive, water-repellent layers are added such as a water dispersion of urea formaldehyde resin containing free formaldehyde, sometimes referred to as urea formaldehyde resin glues, as "Plaskon," "Casco," and the like. While this coating is still somewhat water-soluble but dry enough not to be tacky, it is subjected to a heat-and-pressure calendering operation and then coated with an aqueous suspension of a printing material such as polyvinyl alcohol and appropriate resin suspensions suitable for forming a lithographic water-receptive surface. Invented by William C. Toland and Ellis Bassist, Brookline, Mass. Assigned to William C. Toland, trustee. Application February 5, 1942. 9 claims.

Printing Presses and Equipment:

2,309,186. METHOD OF BUILDING UP A WORN PRINT ROLL of the type used in printing textiles. These rolls are commonly formed of an elongated sleeve of copper or copper alloy mounted on a supporting shaft or mandrel. The worn rolls are built up by wrapping a hard wire about the roll with widely spaced turns, placing a sleeve over the wire and bringing the inner surface of the sleeve into intimate contact with the outer surface of the roll and embedding the wire in both of the surfaces by forcing the sleeve and roll through a die opening. Invented by Joseph M. Goulding, Fairhaven, Mass. Assigned to Revere Copper & Brass Inc., New York, N. Y. Original application July 1, 1938. Divided and this application March 25, 1940. 4 claims.

2,309,646. RUNNING REGISTER for printing mechanisms whereby complete accuracy may be obtained between dies in multi-color printing, or printing in conjunction with slotting. A worm and spiral gear combination can be adjusted so that the principal gear connection from the power shaft to the drive shaft of the drum will rotate in a direction opposite the mechanism and thus increase the speed, or rotate in the same direction and thus decrease the speed of the drum. The drums can thus be adjusted in a direction to correct the deviation from the registry. Printing need not be interfered with during the adjustment. Invented by Charles Jacobson, New York, N. Y. Assigned to S. & S. Corrugated Paper Machinery Co., Inc., Brooklyn, N. Y. Application September 29, 1939. 4 claims.

2,309,794. CONTROLLER FOR INDUCTION MOTORS, especially applicable for alternating current motors of printing presses, which provides for gradual stepless acceleration from one speed to another during starting of the press. The controller comprises a main motor controller and a presetting control station, the same resistance and operating means being employed for threading, inching and running. Arrangement insures automatic return of the control elements to the minimum speed position upon operation of the stop pushbutton and insures such positioning of the control elements prior to restarting of the motor after voltage failure. Invented by Edwin W. Seeger, Wauwatosa, Wis. and Carroll Stansbury, Chevy Chase, Md. Assigned to Cutler-Hammer, Inc., Milwaukee, Wis. Application February 23, 1942. 6 claims.

2,309,910. MEASURING DEVICE for determining the viscosity of printing ink and the amount of solvent in the ink which will vary its ease of application and drying on the paper web. The device has a pump which continually supplies ink to a receptacle that forms a sump. The chamber has various ducts through which the ink flows. The pump creates a fluid pressure in the ducts which varies with the viscosity of the liquid and changes the height of a mercury column to indicate variations in back pressure. Solenoids operate a valve that controls the flow of solvent to the ink. When mercury pressure becomes excessive, the circuit is closed to an alarm system and the pump motor is disconnected. The device is self-draining and passages are not easily clogged so accurate operation of the viscosimeter is assured. Invented by Hermann Kott, East Orange, N. J. Assigned to Speedry Gravure Corp., New York, N. Y. Application July 15, 1941. 5 claims.

2,309,914. STENCIL PRINTING MECHANISM for fabrics, providing mechanism for moving the web of fabric to a printing position where it is stopped by electrically connected circuits. A stencil is automatically lowered in printing position and a clutch is actuated to move scrapers back and forth over the stencil to print the design. The stencil then moves upward and the web moves on to the next printing position where the cycle is repeated. Multi-color designs can be printed with various stencilling units located and locked in position so designs are in exact register. Invented by John T. Montague, Westport, Conn. Assigned by mesne assignments to Linen Guild, Inc., New York, N. Y. Application July 29, 1940. 8 claims.

2,310,262. MECHANISM FOR ADJUSTING A PRESSURE ROLLER on a printing machine, i.e. for moving it toward or away from its associated roller while the machine is in operation. This can be done without interfering with the spacing of the centers of connecting gears with respect to each other. The adjustment is under continuous control and the exact degree of adjustment may be obtained even though the machine is running at full speed. Invented by Albert F. Shields, Jamaica, N. Y. Assigned to S. & S. Corrugated Paper Machinery Co., Inc., Brooklyn, N. Y. Application April 5, 1940. 4 claims.

2,310,363. PRINTING PRESS DAMPING ROLL CONTROL by means of which a simple and efficient arrangement is provided for controlling the continuance of the dampening water supply to the plate cylinder according to whether a sheet is delivered to the printing couple. The mechanism for operating the damping water feed is constructed to permit water feed to be adjusted through five stages over a wide range. Invention is said to provide a press capable of high speed production wherein sheets will be properly fed between the cylinders and the cylinders maintained in proper position for efficient printing action. Invented by George Goebel, Baltimore, Md. Assigned to Crown Cork & Seal Co., Inc., Baltimore, Md. Original application October 1, 1936. Divided and this application May 3, 1940. 4 claims.

2,310,788. APPARATUS FOR INKING RUBBER PRINTING BLOCKS using an inking roller having a surface of screen-like formation, preferably a fine screen, which is inset in countersunk fashion. Surface ink is scraped off clean by means of a scraper, as in intaglio printing. The inking roller thus inked and scraped is adjusted to the printing form at the desired pressure, and the ink which comes to the printing form lies below the cylindrical surface of the roller instead of at the surface as heretofore. There is no blurring, because the elevated parts of the block are properly inked. If a metal block is used for printing, the inking roller should be of somewhat elastic material. Invented by Wilhelm Hummelchen, Siegburg, Germany. Vested in the Alien Property Custodian. Application January 9, 1939. 3 claims.

2,310,965. FLOCKED MATERIAL AND PRINTING MACHINE for producing it in such a manner that flocking is more adaptable to intricate designs and also so that a flocked sheet of paper can be bent or folded without releasing the flock. Briefly the invention consists of applying the flock to the base material in a series or area of closely spaced, but nevertheless separated, small dots. Thereby the brittle adhesive layer is not continuous and does not result in a non-yielding flocking which tends to crack and fall off when bent. Invented by Abraham Leavy, New York, N. Y. and Joseph Ippolito, Paterson, N. J. Unassigned. Application October 21, 1939. 2 claims.

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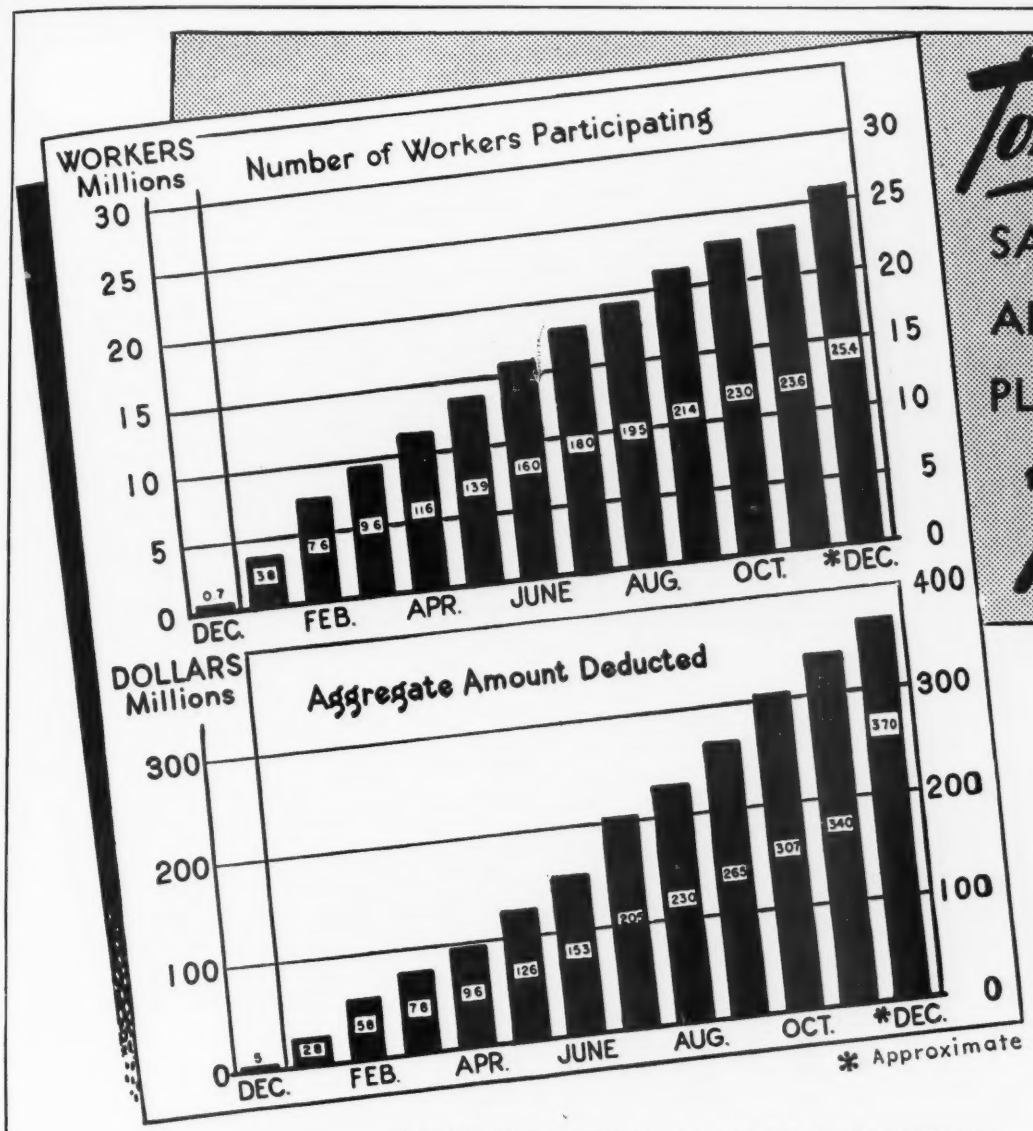

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Here indeed is a solid foundation for the peace-time business that will follow victory. At the same time, it is a real tribute to the voluntary American way of meeting emergencies that has seen us through every crisis in our history.

But there is still more to be done. As our armed forces continue to press the attack in all quarters of the globe, as war costs mount, so must the record of our savings keep pace.

Clearly, on charts like these, tomorrow's Victory —*and tomorrow's sales curves*—are being plotted today by 50,000,000 Americans who now hold WAR BONDS.

EVERYBODY EVERY PAYDAY AT LEAST 10%

Save with

War Savings Bonds

This space is a contribution to America's all-out war effort by

PRINTING EQUIPMENT ENGINEER

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FOUR FREEDOMS *are not* ALL

FREEDOM means more than being free to speak openly, to worship as one will, with food assured, and fearing no man.

FREEDOM is a living, growing aspiration in men's souls. It must continue to grow, else it withers.

FREEDOM in America has been growing for more than five generations. With each generation the growing light in men's minds has revealed new freedoms our forefathers never dreamed of:

Freedom from barriers of distance and of time —an entire nation on wheels; miracle machines that speed information to metal, to paper, to minds; remote hamlets linked by telephone and radio; freedom from many old drudgeries that electricity now performs for us; the freedoms of a multitude of comforts and conveniences; and of better health.

All this has come about in a nation dedicated to the divine concept of the equali[illegible]man, and under the blazing light of complete freedom [illegible] speech and the press—the only illumination [illegible] which minds can grow in knowledge and vision.

Here a scant six per cent of humankind, with no greater gifts than others, has progressed so far toward many freedoms that the path followed and the results are an inspiration to hopeful peoples everywhere.

The way is not easy. It is narrow. It is sometimes rough. Other paths beckon alluringly, as seeming shortcuts.

But in mankind's halting progress through the ages many paths have been explored before. If now in uncertainty we change paths we will slow up progress and confuse those whose eyes are on us. By further smoothing of the proved path we can continue to inspire earnest men everywhere to follow the way that already has led one nation so far toward the better and happier life for all.

★ INTERTYPE ★

Ninth of a series of messages on the Freedom of the Press by INTERTYPE, *Brooklyn*